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EASTERN ANTECEDENTS OF THE GRANGERS

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The Granger uprising was essentially a western manifestation.[1] It had its storm center west of Lake Michigan in the six prairie States of Illinois, Wisconsin, Iowa, Minnesota, Kansas, and Nebraska. Its immediate origins were western. Its program for bringing railroads under public control was western. It was regarded in the East as a typical instance of western agrarianism, a western confiscation of eastern capital.[2]

Yet the backgrounds of the movement lay in the East. In the East, and more especially along the Atlantic seaboard, a history had been unfolding during the preceding quarter century that was a complete justification in the minds of the Grangers of the measures they were taking, if, indeed, any eastern justification was called for. This eastern history—the history of pre-Granger railroad problems and evils along the Middle Atlantic seaboard—is the theme of my paper.

In the Middle Atlantic States lay the main gateways through the mountains separating the West and the East. There the most spectacular of the early internal improvements were built as State enterprises, the Erie Canal and the Pennsylvania Portage and Canal System.

But these canals were late in construction. They were built just as the railroad age was opening. They lost traffic to the railroads as soon as the railroads became effective. First they lost the more profitable forms of traffic, the passenger, the livestock, the general merchandise, and the flour. Later they had to relinquish the grain trade. They lost so much business that soon they did not pay their costs of maintenance and debt service.

The States of New York and Pennsylvania from the outset required railroads competing with the canals to contribute to the costs of maintaining and paying for the canals. They obliged railroads to pay State tolls on railroad freight. The tolls were levied just as if the freight had been carried on the canals. The amount levied was what the State would have collected if the transportation had been on the canals. In New York State the tolls were assessed against the New York Central Railroad and other railroads competing with the Erie Canal. In Pennsylvania they were collected from the Pennsylvania Railroad.

The tolls were resisted by the railroads. They were resisted on the ground that they were taxes on progress. As the railroads became politically more powerful the resistance became more effective. In 1851 a measure was passed by the New York legislature repealing the tolls,[3] and the agitation for abolition of them grew in Pennsylvania.

But considerable sections of the New York public resented the repeal of the railroad tolls. The cities on Lake Erie, especially Buffalo, the flour milling interests along the Erie Canal, especially at Rochester, and all the shipping and forwarding interests along the canal and in New York City, which made a living from the canal, denounced the repeal of the tolls. Many New York taxpayers, who had to shoulder the deficits arising from the canal, also believed the repeal had been a mistake.

A movement gained momentum in New York to reimpose the tolls. It gained momentum especially after the panic of 1857, when the canal lost traffic at an accelerated rate, when the burdens of its upkeep grew, and the State government found difficulty in obtaining revenues.

The reimposition of the tolls was opposed by the New York Central and the Erie railroads. The result was a political battle almost as exciting to New Yorkers in the years 1859 to 1861 as the slavery issue. In the New York legislature the railroad toll issue became a major problem, the greatest local problem before that body. In the end the New York Central and the Erie proved too powerful to be overborne. The tolling movement was defeated, and, after the Civil War, it never revived.

In Pennsylvania, railroad tolls continued ten years longer than in New York. They were not

[1] The address of the president, presented at the annual meeting of the Agricultural History Society in Washington, D.C., on Sept. 16, 1948.

[2] See C. F. Adams, Jr. "The Granger Movement," in the *North American Review*, 120 (1875): 394–424.

[3] *Laws of New York*, 1851, ch. 497.

abolished until 1861. Their abolition was effected only after the Portage and Canal System had been sold to the Pennsylvania Railroad. When the canal had been thus disposed of and scrapped, the legislature was finally persuaded to agree to a repeal of the Pennsylvania tolls.[4]

Both in New York and in Pennsylvania advocates of railroad tolls were the exponents of turnstile morality, seeking to exact tribute from a nation on the flow of interstate commerce. They sought to force the nation to pay for equipment that had become outmoded and outworn. Tolls taken from railroads were by 1850 obstructions to the freedom of the nation's commerce, and their perpetuation was a menace to the Union. That danger was well understood in the West. One of the major proposals of the Windom Committee in its report on *Transportation Routes to the Seaboard* was that a federal railroad be built from the Mississippi River to the seaboard,[5] which should be operated by the United States Government and therefore be forever free from State obstructions.

Interstate commerce on the Atlantic seaboard was subject to interference also by the so-called "transit taxes." Transit taxes were those collected on railroad traffic, passenger or freight, making a transit across a State. They were usually taxes on through commerce. They did not apply ordinarily to traffic which originated in or which ended in a State. The through commerce on which they were chiefly collected was that which flowed along the great north-and-south highways from New York City to the city of Washington.

The State which possessed a location especially advantageous for exploiting transit taxes and which exploited them fully was New Jersey. New Jersey lies between two great industrial States, New York and Pennsylvania, and between two major cities, New York City and Philadelphia. In 1832 a monopoly right to transportation on all routes between New York City and Philadelphia was conferred by the New Jersey legislature on the Camden and Amboy Railroad and certain associated companies.[6] The State took in compensation 2,000 shares of stock in the railroad and its associated companies. In addition, it reserved to itself a transit tax which was to be paid on all through traffic across its territory. The tax was 10 cents on every passenger transported and 15 cents a ton on all merchandise. A partnership was thus established between the State and the Camden and Amboy for the exploitation of interstate commerce.

The partnership was profitable to both partners. The transit tax and the dividends on the stock furnished virtually all the running expenses of the New Jersey State government.[7] Throughout the decade of the 1850s the State was in the happy position of having to levy no general property tax. Likewise the Camden and Amboy and its associated companies made handsome profits.

But the monopoly was unpopular outside New Jersey. Its rates and its transit collection were a form of tribute exacted from the whole eastern half of the nation. They became during the Civil War a menace to the nation. During the war an immense traffic was thrown on transportation lines running from north to south through New Jersey, a traffic in soldiers and in military supplies. To the handling of this traffic the Camden and Amboy was unequal. Its line was, at the beginning of the war, a single track. The military authorities undertook to send troops and supplies across the State by an existing circuitous railroad and steamboat line. This was an infringement of the monopoly rights of the Camden and Amboy, and suit was successfully brought in the New Jersey courts to stop it. The offending corporation was not only obliged to desist but to hand over to the Camden and Amboy all the profits it had already made on the traffic.[8]

The evils of the Camden and Amboy monopoly and tax were debated in Congress and in the press year after year during the Civil War. Bills were introduced into Congress chartering a federal line to cross the State. But nothing came of them. The issue became entangled with the sensitive issue

[4] *Laws of Pennsylvania*, 1861, p. 88.

[5] *Report of the Select Committee on Transportation-Routes to the Seaboard* (43 Congress, 1 session, *Senate Report 307*, parts 1–2, serial 1588–1589, Washington, 1874).

[6] *Compilation of the Public Laws of the State of New Jersey*, 1833, p. 374; see also *ibid.*, p. 331; and *Acts of New Jersey*, 1854, ch. 153.

[7] The aggregate amount received by the State, including the tax and dividends on the stock, to 1862, was $2,615,260. The 1862 payment totaled $188,464. See *Congressional Globe*, 38 Congress, 1 session, appendix, 82. The annual State director's report, printed as part of the New Jersey *Legislative Documents*, contains a year-by-year account of the transit taxes.

[8] *New Jersey Equity Reports*, 16(1863–64): 321; also *ibid.*, 18(1866–67): 546. For earlier litigation in the same controversey, see *ibid*, 14(1861–62): 445; and 15(1858–63): 13.

of States' rights. It was not until 1869 that the monopoly rights of the Camden and Amboy expired,[9] and it was not until then that the transit tax disappeared.

Other States tapped the north-south flow of commerce for revenue purposes. Delaware, bordering New Jersey on the south, in 1864 established a tax of 10 cents on every passenger carried by rail or steamboat through or in the State.[10] The tax was, in all but name, a transit tax. Nearly the entire revenue collected under it was taken on one railroad, the Philadelphia, Wilmington, and Baltimore, which was part of the north-south railroad system between New York and Washington, and which ran through the northern tip of Delaware for a distance of only 23 miles.[11] The tax was levied by the State to finance bonds to the amount of a million dollars which Delaware had issued to provide exemption for her citizens from the draft of 1864. The tax more than met the requirements of the bond issue.

South of Delaware, Maryland took sustenance from the same rich interstate stream. She did so after the mode of New Jersey. She gave the Baltimore and Ohio Railroad in 1833 the right to construct a Branch Line from Baltimore to Washington, a right that became a monopoly. She authorized a fare of $2.50 for the 40-mile journey, which was more than 6 cents a mile. Of this fare, she reserved, as a State transit tax, one-fifth, or 50 cents a passenger.[12] In 1844 a reduction in the fare became necessary because of stagecoach competition. The new fare was set at $1.50. Of this fare the State took 30 cents as a transit tax.[13] That arrangement continued until 1878. The State derived from it a large part of its annual revenue.[14]

[9] The Camden and Amboy prepared itself early for the expiration of its monopoly rights. In 1868 it acquired the circuitous line of its rival, the Raritan and Delaware Bay Railroad. *New York Tribune*, Mar. 18, 1868.

[10] *Laws of Delaware*, 1864, p. 478; also, *ibid.*, p. 481.

[11] See "Annual Report of the Finances of the State of Delaware . . . ," p. 6, which is bound with the *Delaware House Journal*, January 1867.

[12] *Laws of Maryland*, 1832–33, ch. 175.

[13] *Ibid.*, *1844*, ch. 103.

[14] The amount paid into the State treasury by the Branch Line alone on account of stock dividends and the tax over the 5-year period, Dec. 31, 1861 to Dec. 31, 1866, was $1,531,763, which was more than $300,000 a year. See Maryland *House Journal*, 1867, appendix, document G.

Other streams of interstate commerce, especially the great east-west stream, were tapped by means of transit taxes by the Middle Atlantic States. They were tapped to provide the means for meeting the costs of the Civil War. New Jersey took the initiative here as in the case of the north-south stream. In 1862 her legislature established a transit tax carefully designed to apply to non-state railroad corporations whose lines crossed New Jersey borders in the course of an east-west transportation business. The act provided that all corporations regularly doing business in New Jersey, which were not corporations of the State, should pay transit taxes on the business they did in the State at the rate of 3 cents on every passenger and 2 cents on every ton of freight carried for a distance exceeding 10 miles in the State. No tax, however, was to be paid on passengers or freight transported exclusively within the State. The tax was intended to fall especially on two non-state corporations engaged in east-west commerce whose lines crossed New Jersey, the Erie Railroad and the Delaware and Lackawanna.[15]

In 1864 Pennsylvania followed the example of New Jersey. It imposed a freight tax on all railroad, steamboat, and canal companies in the State, of 2 cents a ton on the products of mines and quarries, 3 cents a ton on the products of farms and forests, and 5 cents a ton on all other products.[16] The tax was less exclusively a burden on interstate commerce than New Jersey's. It was made to rest impartially on interstate and intrastate transportation. It was expected to produce a large portion of Pennsylvania's total revenue. In view of the location of the State, it was, like the tax legislation of New Jersey, a special menace to interstate commerce.

In the Far West, Nevada caught the infection. In 1865 her legislature passed a law imposing a passenger tax of a dollar on any person leaving the State by stagecoach or by railroad.[17]

The Civil War transit taxes were less ingeniously contrived than those New Jersey and Maryland had established in an earlier period. They failed to create partnerships in tribute collection with the companies that were to be the collectors. They created, instead, resistance, and test cases in the State and Federal courts. Resistance was made to the 1862 tax of New Jersey by the Erie

[15] *Acts of New Jersey*, 1862, ch. 194.

[16] *Laws of Pennsylvania*, 1864, p. 218.

[17] *Laws of Nevada*, 1864–65, p. 304.

Railroad and by the Delaware and Lackawanna. Law suits were carried by these railroads to the highest State court of New Jersey, and in these the tax was, in 1864, declared to be an unconstitutional interference with interstate commerce.[18] The Nevada tax was carried by a Nevada stagecoach company to the United States Supreme Court where, in 1867, in the case of *Crandall* v. *Nevada*, it was held to be contrary to the Federal Constitution.[19] The Delaware tax, insofar as it was levied on interstate passenger traffic, was contested by the Philadelphia, Wilmington, and Baltimore Railroad as soon as the Nevada tax was overthrown, and in 1870 it was held by the highest Delaware State court to be in conflict with the Federal Constitution.[20] The Pennsylvania tax was contested by the Erie Railroad in the United States Supreme Court in the State Freight Tax Case. So much of it as applied to interstate commerce was held by the court to be contrary to the Constitution.[21]

The States of the Middle Atlantic seaboard obstructed interstate commerce for State advantage in yet another fashion in the 1850s and 1860s. They did so by withholding from out-of-state railroad companies legislative authorization to build interstate lines. The withholding in such cases was a concession to the narrow interests of home railroads, fearful of competition, or was a response to a narrow sense of State patriotism. Prior to the Civil War permission to build railroad lines had to be obtained in most States by special legislative acts. The so-called "free railroad" laws, under which charters to build lines were given to capitalists on the sole condition of meeting administrative requirements, were, in most States of the Union, still some distance in the future. Established railroad companies were able, hiding behind State legislatures, to hold off out-of-state railroad companies wishing to build competing interstate lines.

Maryland was a conspicuous offender in this respect. She attracted wide attention during the 1860s by blocking an out-of-state company that wished to build an interstate line to the national capital. In 1833 her legislature had authorized a line to be built from Baltimore to Washington, the Branch Line, already mentioned, of the Baltimore and Ohio Railroad. That line was, in a sense, the property of the State, since the State and the city of Baltimore owned a large part of the stock of the parent company and controlled its board of directors. The Branch Line held a monopoly of railroad transportation to Washington from all points north and west of the city. No other railroad connected the States of the North and West with the nation's capital. The Branch Line maintained high passenger and freight rates. It paid notoriously high dividends. Nearly all railroad companies in the North that were heavily engaged in troop transportation during the Civil War reduced passenger rates by a third to the Federal Government. But the Baltimore and Ohio made no such concessions. Throughout the sixties the Pennsylvania Railroad was besieging the Maryland legislature for permission to build a line across Maryland to the city of Washington. None of its applications were given any consideration. The Maryland legislature did not propose to permit a line to be built which would break the monopoly it held and reduce the profits it was deriving from the Baltimore and Ohio Branch Line.

The public was scandalized that a State of the Union, none too friendly to the Union, should insist during a war on maintaining a monopoly of railroad transportation to the national capital, especially when the nation was defending that line against attack. The scandal was heightened by the fact that the Baltimore and Ohio refused to connect even at Baltimore with the railroads extending from that city north and northwest. Passengers moving back and forth on the route between New York and Washington had to break journey in Baltimore. Soldiers moving southward to Washington had to be marched through Baltimore streets from the terminals of the northern lines to

[18] 31 *New Jersey Law Reports* (1864–66), 531. The Erie case and the Delaware and Lackawanna case were disposed of by the court in the same decision. In the court below the tax had been upheld. 30 *New Jersey Law Reports* (1862–63), 473.

[19] 6 *Wallace* (1867), 35.

[20] Wilmington *Daily Commercial*, Jan. 13, 1869; Message of Governor Gove Saulsbury, Jan. 3, 1871, p. 15, in *Delaware Senate Journal*, 1871; 4 *Houston's Delaware Reports* (1869–74), 158.

[21] 15 *Wallace* (1872), 232. Maryland's tax on the Branch Line, on the other hand, was upheld by the United States Supreme Court. It was upheld on the ground that it was part of the franchise arrangement made with the Baltimore and Ohio. *Railroad Company* v. *Maryland*, in 21 *Wallace* (1874), 456. Justice Miller dissented. He considered the tax unconstitutional within the principle laid down in *Crandall* v. *Nevada*.

the station of the Baltimore and Ohio, or they had to move across town on horse-drawn cars.[22]

Threats of congressional action to end such obstruction brought no relief. Bills were brought before Congress for the chartering of a federal line through Maryland. But, as in the case of the Camden and Amboy Railroad, they ran into the States' rights issue, and nothing came of them. It was not until 1873 that the Baltimore and Ohio monopoly was broken. It was then broken only as a result of the fact that the Pennsylvania Railroad had managed to pick up a prewar Maryland charter which could be interpreted to give the right to build a line from Baltimore to Washington.

A similar localism dominated Pennsylvania policy. In this State the Pennsylvania Railroad was the dog in the manger; the victim of the dog was the Baltimore and Ohio. The clash between the two had gone on almost from the beginning of their history. The Baltimore and Ohio had wanted, from the time it was chartered, a Pittsburgh terminus on the Ohio River. Pittsburgh was the obvious goal for a Baltimore railroad to the west. Not merely is it the historic gateway to the Ohio Valley, but it lies on the easiest line from Baltimore to the west over the Allegheny Mountains—the line of the Potomac, the Youghiogheny, and Monongahela rivers. But no charter could be obtained from the Pennsylvania legislature for that route. The line was blocked by the group that became the Pennsylvania Railroad. The Baltimore and Ohio was obliged to build across the Allegheny Mountains by a difficult and expensive route through western Virginia to a Wheeling terminus, which was reached only in 1853.[23]

Even after the Wheeling line had been completed the Baltimore and Ohio still sought the right to build a second line, the line of its old preference, to Pittsburgh. It was encouraged to continue the fight for that line by the city of Pittsburgh which wanted freedom from the monopoly control under which it was ground by the Pennsylvania Railroad. A Pennsylvania company, the Pittsburgh and Connellsville, held a charter, permitting construction of a line from Pittsburgh to Connellsville and southward to the Maryland border. The company had failed to complete its line. In 1864 the Baltimore and Ohio acquired control of this company and in triumph began to complete the line. But its triumph was short lived. An act was passed by the Pennsylvania legislature, at the dictation of Tom Scott, of the Pennsylvania Railroad, cancelling the Connellsville charter. The act of cancellation was a high handed and unconstitutional measure. It was clearly a violation of the federal constitutional guarantee against State impairment of the obligations of a contract. After a legal battle of four years the cancellation was held by State and Federal courts to be null and void.[24] But the Baltimore and Ohio, in the meantime, was delayed further in the building of its Pittsburgh line. The total delay to which it was subjected was more than a quarter of a century.

The significance of such State obstructions to the free flow of interstate commerce was well understood by the nation. It was pointed out in Congress repeatedly during the Civil War. It was set forth with eloquence by such nationalists as Charles Sumner, Thaddeus Stevens, John Sherman, and James Garfield. It was exhibited with especial clarity in a speech by Charles Sumner in the Senate in 1865. That speech is worth quoting at some length. It was directed at the transit tax of New Jersey, but its reasoning applied to every form of State obstruction to interstate railroad commerce:

> But if New Jersey can play successfully this game of taxation, and compel tribute from the domestic commerce of the Union as it traverses her territory on the way from State to State, then may every other State do likewise. New York, with her central power, may build up an overshadowing monopoly and a boundless revenue, while all the products and population of the West traversing her territory on their way to the sea, and all the products and population of the East, with the contributions of foreign commerce, traversing her territory on their way to the West, are compelled to pay tribute. Pennsylvania, holding one of the great highways of the Union; Maryland, constituting an essential link in the chain of communication with the national capital; Ohio, spanning from lake to river, and forming a mighty ligament of States, East and West; Indiana, enjoying the same unsurpassed opportunities; Illinois, girdled by States

[22] The assault by a Baltimore mob on Massachusetts troops moving to the defence of the National Capital in the early days of the war highlighted this break in connections.

[23] A good account of this contest is Joseph S. Clark, Jr., "The Railroad Struggle For Pittsburgh," in the *Pennsylvania Magazine of History and Biography*, 48(1924): 1–38. This paper was written as an honors thesis at Harvard University under my direction.

[24] *City of Baltimore* v. *Connellsville and S.P.R.Co.*, *Federal Cases*, no. 827 (1865).

with all of which it is dovetailed by railroads east and west, north and south; Kentucky, guarding the gates of the Southwest; and finally, any one of the States on the long line of the Pacific railroad may enter upon a similar career of unscrupulous exaction until anarchy sits supreme, and there are as many different tributes as there are States. If the Union should continue to exist, it would be only as a name. The national unity would be destroyed. . . .

If there be any single fruit of our national unity, if there be any single element of the Union, if there be any single triumph of the Constitution which may be placed above all others, it is the freedom of commerce among the States, under which that *free trade*, which is the aspiration of philosophers, is assured to all citizens of the Union, as they circulate through our whole broad country, without hinderance from any State. But this vital principle is now in jeopardy.

Do not forget that it is the tax imposed on commerce between New York and Philadelphia, two cities outside of the State of New Jersey, which I denounce. I have denounced it as hostile to the Union. I denounce it also as hostile to the spirit of the age, which is everywhere overturning the barriers of commerce. The robber castles, which once compelled the payment of toll on the Rhine, were long ago dismantled. . . . Kindred pretensions in other places have been overthrown or trampled out. The duties levied by Denmark on all vessels passing through the Sound and the Belts; . . . the tolls exacted on the Danube in its protracted course; the tolls exacted by Holland on the busy waters of the Scheldt, and all transit imposts within the Zoll-Verein of Germany, have all been abolished; and in this work of enfranchisement the Government of the United States led the way. . . . But the right of free transit across the States of the Union is now assailed. Strange that you should reach so far to secure *free transit* in the Baltic and should hesitate in its defence here at home![25]

Yet Congress did hesitate. It refused to adopt any of the bills brought before it to give federal charters to railroad companies for lines through obstructing States. All such bills foundered on the rocks of intrenched State interests and State rights. In December 1865, a warning of the dangers to the Union of State obstructions was sent to Congress by President Andrew Johnson in his first annual message, and legislation was asked to "prevent any selfish impediment to the free circulation of men and merchandise."[26] The response of Congress was a feeble act—an emasculated version of a measure Sumner had drawn. It authorized railroads in any State to connect with railroads of other States so as to form continuous lines of transportation, but was not to be construed "to authorize any railroad company to build any new road or connection with any other road without authority from the State in which said railroad or connection may be proposed."[27] Proposals in Congress for a federally owned and operated railroad from the Mississippi River to the seaboard, sponsored ultimately by the Windom Committee, were also easily brushed to one side. It was not until the States themselves were brought to adopt "free railroad" charter laws that State obstructions to interstate commerce were removed, and such laws did not become general in the East until the 1870s.[28]

In the meantime the American public had become aware of the fact that giant aggregations of railroad capital were virtually sovereign in the States, that they were able to shape State policy, sometimes in partnership with State governments, sometimes by dominating and corrupting State

[25] *Congressional Globe*, 38 Congress, 2 session, Feb. 14, 1865, 793.

[26] The recommendation was cogently phrased: "The Constitution confers on Congress the right to regulate commerce among the several States. It is of the first necessity, for the maintenance of the Union, that that commerce should be free and unobstructed. No State can be justified in any device to tax the transit of travel and commerce between States. The position of many States is such that if they were allowed to take advantage of it for purposes of local revenue the commerce between States might be injuriously burdened, or even virtually prohibited. It is best, while the country is still young and while the tendency to dangerous monopolies of this kind is still feeble, to use the power of Congress so as to prevent any selfish impediment to the free circulation of men and merchandise. A tax on travel and merchandise in their transit constitutes one of the worst forms of monopoly, and the evil is increased if coupled with a denial of the choice of route. When the vast extent of our country is considered, it is plain that every obstacle to the free circulation of commerce between the States ought to be sternly guarded against by appropriate legislation within the limits of the Constitution." James D. Richardson, *A Compilation of the Messages and Papers of the Presidents*, 6: 362 (Washington, 1897).

[27] 14 *Statutes* (1865–67), ch. 124.

[28] New York was a pioneer among the Eastern States in adopting free railroad laws. Her law was adopted in 1850. *Laws of the State of New York*, 1850, ch. 140. On the subject of free railroad laws, see Balthazar H. Meyer, "Railway Charters," in the American Economic Association, *Publications*, ser. 3, 1 (1900): 231–244.

governments. The American public, East and West, had come to recognize that railroad corporations were the Frankensteins of the States, that they were creations mightier, often, than their creators. The nation had reason to believe that the Camden and Amboy Railroad was the power that governed New Jersey, that its leading spirit, Commodore Stockton, had the State government at his beck and call. The public believed that the Pennsylvania Railroad dictated railroad policy in the Keystone State, that its vice president, Tom Scott, was the lord of Harrisburg. The press reported that after the midnight vote of the State legislature cancelling the Connellsville charter, one weary legislator, partly sober, turned toward Scott who was watching the proceedings from the floor, and asked, "Now may we go Scott free?"[29] In New York Cornelius Vanderbilt of the New York Central, and the unsavory trio of the Erie Railroad, Daniel Drew, Jay Gould, and Jim Fisk, were believed to be the makers of Empire State railroad policy.[30]

The national conviction that railroads were able to control the States was an important element in Granger thinking. The Grangers were resolved that in the West railroads should be put in their place, that there, they should be the servants, not the masters of the public.

To farmers and shippers in the Middle Atlantic States local railroad problems were even more disturbing than obstructions to interstate commerce. The local problems, which excited them and led them into the first widespread eastern anti-railroad movement, were problems created by the trunk line railroads that ran from the West through the Middle Atlantic States to the seaboard.

The trunk line railroads traversing the Middle Atlantic States were four in number. They were the New York Central, the Erie, the Pennsylvania, and the Baltimore and Ohio. They had been rivals of one another and also competitors of the Erie Canal for the trade of the Northwest as soon as they made their western connections in the early 1850s, and their competition had steadily become keener as the decade advanced.

They fought each other by reductions in freight rates that frequently degenerated into rate wars. They were accustomed during the rate wars to carry produce from the West to the seaboard at heavy loss. The rate wars were deplored by the managers of the roads, who did their best to avert them by rate compacts, made at the annual railroad conventions. But the compacts were never long effective. They were usually broken almost as soon as they were made. Indeed the history of the trunk lines from the time they were built to the time of the Interstate Commerce Commission is a long history of destructive competition. The competition was especially destructive in the years following the panic of 1857. In those years the volume of traffic from West to East was declining, and the lines were fighting for whatever part of it they could attract.

The chief victims of this cutthroat competition were the farmers of the eastern seaboard. They lost the protection which high transportation costs had earlier given them against the competition of cheap western produce. Following the panic of 1857 the prices of produce had fallen precipitously in eastern markets. They fell further still as a result of the trunk line rate wars. Not only farm prices but land values collapsed in the Middle Atlantic States.

The distresses of the eastern farmers were converted to wrath by the high local charges imposed by the trunk lines on way freight. The local charges on way freight were whatever the traffic would bear. They were at a level that would permit the trunk lines to recover losses suffered on through freight. In the State of New York they were such that communities in the center of the State paid more for the transportation of their produce to the seaboard than communities at the Buffalo end of the State, which were protected by the Erie Canal.

An outcry against these inequalities and discriminations was raised by the farmers and shippers of the Middle Atlantic States. The outcry grew as the distresses of the depression deepened into a full-fledged anti-railroad movement. This movement, the so-called "pro rata movement" of 1858–61, was the first sectional rising in the United States against railroads. It had its center in New York where it merged with the railroad tolling movement. It reached southward as far as Virginia.

The objective of the pro rata movement was

[29] *Pittsburgh Commercial*, Mar. 20, 1867.

[30] In 1872 Wendell Phillips declared: "Take a power like the Pennsylvania Central Railroad and the New York Central Railroad, and there is no legislative independence that can exist in its sight. As well expect a green vine to flourish in a dark cellar as to expect honesty to exist under the shadow of those upas-trees." *Speeches, Lectures, and Letters* (ser. 2, Boston, 1891), 175.

legislation that would outlaw the inequalities between local and through transportation charges. Legislation was sought that would oblige the railroads to maintain the same rates per ton-mile for local as for through freights. Bills for that purpose were brought before the New York and other Middle State legislatures every year from 1858 to 1861.

These bills were ill framed. They ignored the economics of railroad transportation. As the spokesmen of the railroad companies pointed out, local freight—any freight, transported for short hauls—costs more per ton-mile to move than freight transported for long distances. The overhead, the terminal costs, and the turn-around costs of short hauls, are higher than of long hauls. The trunk lines could not survive if forced to reduce local rates to the level of through rates. Nor could they survive if they raised through rates to the level of way rates. If the through rates were raised to the way-rate level the traffic would be diverted to the Erie Canal or to railroads unrestricted by pro rata legislation. These difficulties were pointed out by the trunk line spokesmen in the press and at legislative hearings on the pro rata measures. The pro rata measures were therefore defeated without difficulty.

The pro rata movement subsided with the coming of the Civil War. The feeling which had produced it evaporated in the sunshine of prosperity that the war brought. A quarter of a century after the outbreak of the war the intent of the pro rata bills was written into the long and short haul clause of the Interstate Commerce Act of 1887.

It is evident from this brief survey that railroad problems of a kind familiar to the Grangers, early confronted the Atlantic seaboard—problems of interstate and problems of local or way commerce. These problems produced in the East anti-railroad agitation and demands for the intervention of Federal and State governments. They ended, however, in no uprising comparable to that of the Grangers, in intensity, in area involved, or in effect. The Eastern anti-railroad resentments smouldered, then subsided, with little legislative result. They subsided for reasons already noticed. The problem of State obstruction to interstate railroad commerce was met on the eastern seaboard by court decisions, by State adoption of "free railroad" laws, and by the upsurge of nationalism that occurred after 1865 in the North as a result of the winning of the war for the preservation of the Union. The local grievances of eastern farmers against railroads on the score of discriminations against way freights were alleviated when the prices of farm produce recovered during the Civil War from their depression levels. The absorption of the public in the East in the war and in the problems of Reconstruction afterward had the effect of diverting notice from railroad issues.

In the Granger West on the other hand, the war aggravated railroad problems and grievances. The war closed the lower Mississippi River to northern commerce, and the river never again established itself as an important carrier of western produce or as a regulator of transportation charges for the region west of Lake Michigan. The war led to a consolidation of railroad lines immediately west of Lake Michigan and the formation there for a time of a virtual monopoly of transportation services.[31] In the Granger area transportation problems had always been more difficult than in the East because of farmer addiction to single cropping. The Grangers were embittered over land-grant problems. Finally the price decline for western produce which set in after the close of the war, and which ended in a collapse following the panic of 1873, brought the westerners to desperation. All these elements account for the fact that the Granger grievances reached the stage of explosion whereas those of the farmers of the eastern seaboard merely smouldered and sputtered, and subsided.

[31] The effect of the war on railroad transportation in the area directly west of Lake Michigan, and the Anti-Monopoly Movement there are dealt with in my *Economic History of Wisconsin During the Civil War Decade* (Madison, 1916), chs. 9–13.

THE FARMERS' ALLIANCE AND THE FARMERS' UNION

An American-Canadian Parallelism

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Born of the same mother and cradled in the same environment, Canada and the United States have grown to maturity exhibiting a strong family resemblance. Despite this fact, which makes Canada the easiest country in the world for us to understand since she is the most like us, we have in the past ignored her; the great majority of Americans have not known even the most obvious facts about the Dominion and her history.

In recent years, however, and perhaps due to the extensive Canadian-American cooperation during and after the two World Wars, historians as well as the general public on the United States side of the line have increasingly turned their attention to the north. Unfortunately, this attention has been limited in scope. The formal diplomatic relations between the two countries have been thoroughly explored, but much less attention has been given to their cultural, economic, and social connections and to the fact that their common environment and problems have produced, continuously and often unconsciously, parallel movements and trends.

The purpose of this article is to illustrate this parallelism by describing a striking example of it—the simultaneous and unconnected development of the Farmers' Alliance in the American Northwest and of the Farmers' Union in Manitoba and the Northwest Territories of Canada.[1] The validity of this example is underlined by the fact that the similarities, generally observed throughout the two countries, are most marked of all in the region of the upper Middle West and the Canadian prairies across the border. Here the physiographic provinces of North America trend north and south, making the 49th parallel a supreme example of man's arbitrariness in drawing artificial political lines which bisect geographic and economic unities. On both sides of the boundary, wheat fields long carpeted the rich soil of the Interior Lowlands Province; and cattle, which showed no external mark of differing national origin, dotted the grasslands of the High Plains Province. Here physiography, soil, and occupation have always been strikingly similar. In this common environment, the boundary was no more a barrier to ideas and movements than it was to the prairie winds which ceaselessly blew across it, bending the interminable fields of wheat, Canadian and American alike.

By the 1880s, settlement on both sides of the line had concentrated in the fertile Red River Valley, common to Minnesota and Dakota Territory in the United States and to Manitoba in the Dominion. This was the setting for the Farmers' Union in Canada and one of the citadels of the Farmers' Alliance in the United States; it is the area which will be used as the basis for comparing the two organizations.

Since the Northwestern Farmers' Alliance is better known than its Canadian counterpart, it will be described first. This organization was founded in Illinois in October 1880[2] and soon spread throughout the Northwest. By the end of 1881, there were enough local chapters in Minnesota to warrant the formation of a State Alliance.[3] For some years, it struggled against indifference and difficulties, but by the middle of the decade it was well-rooted and was rapidly growing and thrusting out its branches.

What made the new plant flourish was the fertile soil of discontent in which it grew. The

[1] This article is from the author's study entitled "The Movement for the Annexation of Canada to the United States, 1849–1893," a doctoral dissertation presented at Yale University in 1940. The article does not pretend to be a definitive history of either movement but simply a comparison of their striking similarities of origin, purpose, and activity. Although I have done much original research on the subject, I have also leaned heavily on the excellent description of the Farmers' Alliance by Professor John D. Hicks.

[2] John D. Hicks, "The Origin and Early History of the Farmers' Alliance in Minnesota," *Mississippi Valley Historical Review*, 9: 203–204 (1922). Hereafter this article is cited: Hicks, "The Farmers' Alliance."

[3] *Ibid.*, 204; and Victor E. Lawson, "The Farmers' Alliance in Kandiyohi County," *Minnesota History Bulletin*, 4: 337 (1922).

decade of the 1880s was, in general, a period of hardship for the farmer of the Northwest. The price that he received for his cash crop, wheat, was consistently low, barely covering the cost of production and sometimes not doing even that. He was aware that this price was set in a world market beyond his control and the control of other interest groups in the United States. But he also felt that the difference between this world price and the price that he received locally was much too great.[4] It seemed obvious to him that those who handled and transported his wheat were taking more than a fair compensation for their services. Nor was this all. The farmer was exploited not only as a buyer but also as a seller, for he purchased his necessaries—such as clothing, machinery, and supplies—from unregulated and tariff-protected trusts and monopolies. Thus the agrarian group in its desperate struggle for a living was being attacked on both flanks by the heavy battalions of organized capital.

The Alliance was created specifically to unite the farmers for this battle. It was a class group organized for class purposes; negatively, to block the legislation intended to benefit the capitalists, and positively, to force the passage of laws which would aid its own members by using the state to police and to regulate its economic enemies. It is therefore necessary to identify these enemies and to point out their objectionable practices. The story of these agrarian complaints—which grew and multiplied, luxuriant and variegated as tropical vegetation—has often been told and needs no detailed retelling here. It is important, however, for purposes of comparison with the Canadian movement, to recall the major grievances on the American side of the line.

The railroads undisputedly occupied the first place in the demonology of the Northwestern farmers who lost no opportunity to denounce the roads and their works. The most frequent complaints made against them was that their freight and passenger rates were exorbitant. The farmers would not begrudge a reasonable return,[5] but they did not propose to tolerate charges which would yield extortionate profits.[6] It is difficult to assess the accuracy of the many statements made about rates. The important fact is that the ordinary farmer believed, rightly or wrongly, that the railroads overcharged him, and he acted on that belief. He attributed these high rates to several conditions. For one thing, most of the shipping points in the Northwest were served by only one railroad. Free from the sharp correctives of competition and regulation, the roads were able to charge what the traffic would bear. Thus rates between some points in Minnesota and Dakota, where there was no competition, were four times greater than rates from the Twin Cities to Chicago, where competition was strenuous.[7] It cost as much to ship wheat from Fargo to Minneapolis as it did to send it from Minneapolis to New York![8] Another reason for the high rates was the overcapitalization of the railroads. Their charges had to be high if they were to pay interest and dividends on watered securities.[9] The pain of these injustices was sharpened by ingratitude. Public aid had made possible the building of the railroads, aid in the form of land grants and credits generously voted by legislatures the great majority of whose members represented rural constituencies.[10] Now the roads were profiteering at the expense of those who had been their friends in need.

The high level of rates was not the only complaint of the farmer against the railroads. The latter were frequently accused of discriminating between individual shippers and using such devices as secret rebates and better service to ruin the competitors of big shippers.[11] Discrimination

[4] The instances of this complaint are almost innumerable. For examples, see the *St. Paul and Minneapolis Pioneer Press*, Feb. 24, and May 26, 1887. Hereafter this source is cited as *Pioneer Press*.

[5] *Ibid.*, Apr. 3, 1888.

[6] *Ibid.*, Apr. 7, 1884. The St. Paul, Minneapolis, and Manitoba was the most prosperous railroad in the country, in relation to its size, for it earned a net return of 23 percent in 1881. *Ibid.*, Aug. 16, 1882.

[7] Hicks, "The Farmers' Alliance," 208–209; and the proceedings of the executive board of the Minnesota Alliance as reported in the *Pioneer Press*, May 26, 1887.

[8] *Ibid.*, Jan. 5, 1884.

[9] The Alliance estimated that the railroads of Minnesota had cost about $88,500,000 to build. A fair profit for dividends on this investment at the prevailing rate of interest would be $5,321,000. Instead, the roads had net earnings in 1885 of over $13,000,000 available for interest and dividends. They were thus earning and paying about $7,700,000 on watered stock and at the expense of the public. *Ibid.*, Oct. 11, 1888.

[10] The aid given to Minnesota railroads totaled $76,490,000 by 1882, or $23,331 per mile of track actually constructed. William Watts Folwell, *A History of Minnesota*, 3: 159–160 (St. Paul, 1926).

[11] For examples of this complaint, see *Pioneer Press*,

between shipping points was also a sore grievance. Small town merchants, as well as the farmers, were convinced that the railroads favored the larger cities in their rate schedules in order to concentrate business there and to smother the potential competition of other communities.[12] Another complaint was against the railroads' practice of issuing free passes to important public officials, including legislators. The Alliance charged that this practice not only predisposed the recipient in favor of the railroad but also meant that the paying passenger was charged more in order to cover the expense of carrying the free passenger.[13]

Then, too, the farmers' ire was directed against the railroads for their success in escaping taxation. When they were new and their hold on life was precarious, they had been given partial exemption.[14] Now that they were able to carry their share of the tax burden the Alliance demanded that they be made to do so.[15]

If the railroads were the foremost enemies of the farmers, the grain elevators were not far behind. The railroad charged the farmer too much when his wheat was shipped; the elevator paid him too little for it when it was sold. Again, he found himself in the squeezing grip of a monopoly. The large elevators, aided by railroad discrimination,[16] drove out their small competitors and the independent buyers or "scoop-shovellers."[17] The remaining elevators then formed state associations and ceased to compete with each other in buying. The same price was quoted at all elevators in a town, and the farmer could accept that price or haul his wheat back home.[18] If he attempted to bypass the elevators by shipping his wheat to city markets himself, he soon learned the heresy of such an idea. The railroads had no cars available for the use of those who refused to sell to or through an elevator.[19] So the farmer was cast upon the mercy of the elevator owners, and it was not a tender mercy. It was estimated that the sharp devices of these men netted them as much as 5 to 14 cents a bushel above their legitimate charges.[20]

Thus the farmer was ground between the upper millstone, the railroad, and the nether millstone, the elevator. These were his local and visible, almost his personal, enemies. But there were other interests, less tangible and immediate, but equally sinister in his sight. These he called, vaguely, "The Trusts" and "Wall Street," and he had grievances against both of them. Wall Street, symbolizing the money interest, was blamed because the loans that the farmer obtained cost him high interest, a serious drain on the thin purse of the Northwest where, as in all young agrarian communities, credit was the lifeblood of economic existence.[21] The Alliance accused the trusts of establishing and protecting a monopoly position behind the rampart of an unreasonably high tariff and of charging extortionate

Jan. 5, 26, 1884, and Oct. 5, 1887; *Minneapolis Tribune*, Apr. 7, 1884; and *Labor Echo* (St. Paul), Oct. 1, 1887.

[12] *Pioneer Press*, Apr. 14, 1887, and June 28, 1888.

[13] It was stated that free passes accounted for one-fifth of the passenger business on one road and cost the paying passengers $300,000 a year in higher fares. *Ibid.*, Mar. 18, 1884, and Feb. 17, 1887.

[14] *Ibid.*, July 12, 1884. In some instances, all railroad lands were exempt from taxation. *Carrington* (Dakota Territory) *News*, undated, quoted in *Fargo Daily Republican*, July 24, 1883.

[15] Both the Minnesota and Dakota Alliances demanded equal taxation. *Pioneer Press*, Feb. 7, 1885, and Dec. 11, 1888. The Alliance claimed that individuals in the State paid a property tax of 22.1 mills per dollar while the railroads paid 3.6 mills. *Ibid.*, Apr. 3, 1888.

[16] The railroads often refused to furnish cars to small elevators. It is important to note that many of the larger elevators were owned by the roads themselves. *Ibid.*, Feb. 22, 1884, and Oct. 8, 1887; and *Labor Echo*, Oct. 1, 1887.

[17] These independents bought the grain from the farmers at trackside and literally scooped it into cars. Their overhead was low since they had no elevators or expensive equipment, and they were consequently able to pay a premium price for grain.

[18] The elevators not only set a common price but often pooled their purchases. *Pioneer Press*, Jan. 29, 1882, and Jan. 12, 21, 1884. For a description of the means by which competition was eliminated from grain buying, see Paul R. Fossum, *The Agrarian Movement in North Dakota* (Baltimore, 1925), 12–13.

[19] *Pioneer Press*, Oct. 18, 1887.

[20] *Fargo Daily Republican*, Oct. 17, 1883; *Pioneer Press*, Jan. 19, 21, 1884, and July 22, 1885. Price-cutting devices included undergrading, overallowance for dockage, false weights, and mixing. The difference between the local and the Minneapolis price was often as much as 24 cents a bushel even when the transportation to that city was 10 cents a bushel or less.

[21] Folwell, *A History of Minnesota*, 3: 170; *Pioneer Press*, Jan. 9, 1886, and Jan. 11, 1889.

prices for necessaries such as agricultural implements, twine, and clothing.[22]

These many complaints constituted the jeremiad of the Farmers' Alliance. Whether the grievances were authentic or not is beside the point; the farmer believed that they were, and he proposed to act on this belief. Those whom he singled out as his enemies realized this and sought to disarm him before he could attack them. With the air of innocence unjustly accused, these interests assured the farmer that they were his friends, not his enemies; the practices which he denounced could easily be justified. The railroads regretted that their rates were high, but railroading in the rigorous climate of the Northwest was expensive. Besides, traffic was light in this thinly populated area. The elevator owners protested that they did not undergrade the farmer's wheat; rather, he overestimated its quality. Money lenders pointed out that farm credit was risky; high interest was necessary to attract capital.[23] Editors of conservative newspapers underlined these explanations. In the tones of a kindly uncle remonstrating with a petulant young man, they also gently suggested that the farmer was partly responsible for the misfortunes which he blamed on others. He had overextended his operations and had gone deeply into debt when purchasing land and equipment. The editors also preached another theme. Comfortably seated in their offices, so near to and yet so far from the dusty and parched wheat fields, these armchair homesteaders saw that the greatest mistake of the farmer was his stubborn economic monogamy, his devoted marriage to wheat. They never tired of urging him to embrace other interests, preferably dairy farming.[24]

None of this deterred the farmer. He rejected explanations, reacted to criticism as a bull to a red rag, and prepared to act. A brief description of his actions and their results forms the final part of the American phase of this article.

Politics would be the principal weapon of the embattled farmer as the constitution of the Alliance clearly foreshadowed.[25] There was no attempt at first to form a third party,[26] for the Alliance leaders saw the folly of forcing their constituents to choose between an ancient political allegiance and a new class-group allegiance. Instead, pressure-group tactics were planned. The farmers would unite to defeat hostile legislation and candidates and to force agrarian platforms and candidates upon the old parties.[27]

In 1885, the Minnesota Alliance was ready for its first test of strength. The groundwork was laid, and the time was propitious. Discontent ran high, the legislature had a farmer majority, and the opposing interests were on the defensive, daring only to snipe from cover at the Alliance and its program.[28] Using all weapons available to it, the Alliance held its annual convention during the session of the legislature and exerted heavy pressure on the latter. The result was a pair of important laws. The first set up a State railway commission to inspect the railroads; it also prohibited discriminatory rates, forced the roads to furnish cars to all who needed and would use them, and opened the way for the building of more elevators.[29] The second law established official grades for, and State inspection of, grain at terminal elevators.[30]

The Dakota Alliance used the same tactics. It met early in 1885, adopted a set of demands, and appointed a committee to compel the legislature to enact them into law.[31]

[22] Both the Dakota and Minnesota Alliances consistently urged a lowering of the tariff on items that the farmers needed. Folwell, *A History of Minnesota*, 3: 170; *Minneapolis Tribune*, June 13, 1884; and *Labor Echo*, Feb. 23, and Mar. 23, 1889.

[23] For examples of such explanations, see *Pioneer Press*, Jan. 14, 1884, Jan. 9, 1887, and Feb. 2, 1889.

[24] This suggestion had much theoretical merit but was clearly impractical for many farmers in Minnesota and Dakota. See *Fargo Daily Republican*, Dec. 27, 1883; *Duluth Daily Tribune*, undated, quoted in *Fargo Daily Republican*, Nov. 7, 1883; *Minneapolis Tribune*, Apr. 25, 1884; *Pioneer Press*, Mar. 21, 1885. See also George N. Lamphere, "History of Wheat Raising in the Red River Valley," in Minnesota Historical Society, *Collections*, 10 (1): 1–33 (St. Paul, 1905), for an explanation of the reasons for agrarian hardships and failure.

[25] Hicks, "The Farmers' Alliance," 203–204.

[26] *Pioneer Press*, May 30, 1886.

[27] Hicks, "The Farmers' Alliance," 203–204.

[28] *Pioneer Press*, Jan. 3, 1885.

[29] *Minnesota Law Supplement for 1885*.

[30] *Ibid.* The Senate, responding to undercover pressure, amended these laws as much as it dared, but they represented a considerable improvement and a good beginning for the Alliance. *Pioneer Press*, Mar. 1, 2, 3, and 4, 1885.

[31] *Ibid.*, Feb. 20, 1885. The Dakota Alliance had already won concessions from the Manitoba railway by direct protests to its officers. *Ibid.*, Jan. 30, and Feb. 13, 1884.

Thus the farmers of the Northwest had seized the offensive and had won the first battle. Encouraged by success, they determined to strike hard in the election of 1886 in an attempt to gain control of the Minnesota government. They formulated a program of proposed reforms to be presented at the major party conventions with demands that it be placed in party platforms. A political auction was expected to result with the Alliance endorsement as the prize for the higher bidder.[32]

This device won early success in local conventions, which named farmer candidates and adopted the farmer program. Then, on the eve of the State conventions, the Minnesota Alliance delivered its *coup de maitre*, forming a coalition with the Knights of Labor to war upon the great interests, common enemies of the farmer and the worker.[33] A political juggernaut was thus created, slow and creaking in movement, but crushing in power. The Republican convention capitulated to it, transplanting the demands of the Alliance and the Knights into its platform practically verbatim.[34] The Democrats showed more fight. They accepted the planks offered by the Knights but treated the Alliance cavalierly.[35] On the other hand, their gubernatorial candidate was more acceptable to the farmers than the Republican choice.

This turn of events created a problem of choice for the Alliance and the Knights. Their solution betrayed their political naivete, for they endorsed both the Republican platform and the Democratic candidate![36] Such a delightfully impartial shower of blessings created less confusion than might be expected. Most of the members of the Alliance voted for the endorsed candidate rather than the endorsed platform. As a result, the Republican gubernatorial candidate slipped into office with a margin of 2,600 votes;[37] his party's majority was normally at least 15,000. The principal defections from the Republican ranks came in the areas where the Alliance was strong.

This election led the Alliance to expect more from the legislature of 1887 than it had received from the legislature of 1885. Two-thirds of its newly elected members were farmers, and the Alliance had organized them for united action.[38] Moreover, it felt that those Republican leaders who usually represented the interests were too shaken by their party's narrow escape from defeat to offer much resistance to reform measures.[39]

The early days of the legislative session increased Alliance hopes for complete success. The farmer-labor machine moved relentlessly toward its goals, flattening the disconcerted opposition. Then suddenly it broke down, overheated by internal friction.[40] The representatives of the interests seized this unexpected opportunity and briskly assumed the initiative dropped by the farmer members now deep in internecine warfare. All but one of the Alliance bills were either defeated or amended beyond recognition.[41]

That they had been so close to success only made their ultimate defeat harder for the farmers to bear. But they could not abandon the fight. More reforms were necessary, and they would

[32] *Ibid.*, June 5, 1886.

[33] *Ibid.*, Sept. 2, 1886. The following year, a similar understanding was reached with the Business Men's Association, an organization of merchants and others in small towns set up to fight railroad discriminations that favored the cities. *Ibid.*, Apr. 14, and June 9, 1887.

[34] *Ibid.*, Sept. 22, 23, 1886.

[35] *Ibid.*, Sept. 15, 24, 1886. James J. Hill, president of the Manitoba Railway and Democratic leader was blamed for that party's attitude toward the Alliance. He could hardly accept their platform, heavily salted as it was with denunciations of the railroads.

[36] *Ibid.*, Sept. 24, 1886. This amazing action was a compromise. The Knights favored the Democrats while the Alliance was equally strong for the Republicans.

[37] *Legislative Manual for the State of Minnesota for 1887* (St. Paul, 1887), appendix, iii–lxviii.

[38] *Pioneer Press*, Dec. 15, 1886. Specifically, the Alliance wanted regulation of local elevators, direct legislative control of railroad rates, a free market for grain, and a lower legal rate of interest. Hicks, "The Farmers' Alliance," 220.

[39] Their leading organ had pointed out that the vote of 1886 was a sharp rebuke from the farmers. *Pioneer Press*, Nov. 9, 1886.

[40] Ignatius Donnelly and his attempts to dominate the farmer-labor bloc were largely responsible for this split. Part of the bloc revolted against his domineering leadership and fought him and the legislation he proposed.

[41] The exception was a railroad bill forbidding rebates and other forms of discrimination and giving the commission the power to lower rates. The last provision was declared unconstitutional by the Supreme Court of the United States.

have to battle to hold the ground already won.[42] The Alliance felt, however, that it must adopt new tactics. Since it could not expect results from the old parties, even when they adopted its platforms, it would have to insist that they accept its candidates as well as its ideas. Acting on this principle, the executive committee of the Minnesota Alliance endorsed Albert Scheffer as its choice for the Republican gubernatorial candidate in 1888 and campaigned vigorously for his nomination. Inexperience and division again plagued them. Scheffer, a wealthy banker associated with brewery interests, was a most inappropriate choice for an agrarian organization, and part of the Alliance and the Knights revolted against those of their leaders who had selected him, set up the Farm and Labor Party, named Ignatius Donnelly as their candidate for governor,[43] and campaigned for him principally by attacking Scheffer. This intramural warfare could have only one result. Scheffer, disavowed by part of the only classes from which he could get real support, was badly defeated in the Republican State convention; Donnelly realized the hopelessness of his own candidacy and withdrew from the race.[44]

Bloc voting was the heavy political artillery of the Alliance, and its blundering leaders had, in effect, spiked their own guns by creating this division. Badly demoralized, the members of the organization split their votes in the election. The Republicans, who won by a majority of 25,000, were under no obligation to the Alliance for the victory.

The results of this election were reflected in the actions of the legislature of 1889. Every bill supported by the Alliance was smothered under hostile majorities. The legislature also rubbed salt into agrarian wounds by electing W. B. Washburne, a miller and railroad man hence doubly hateful to the Alliance, to the United States Senate.[45] Thus the farmers, politically helpless in the early 1880s, influential in 1885, and dominant for a time in 1887, had come the full circle back to political impotence. Errors of judgment by their leaders were partly responsible for their plight; but they chose to blame the "treachery" of the old parties for it, and they now embraced the idea that they had previously repulsed—a third party. Henceforth, the Alliance began to melt into this political organization, a phase of its history which lies outside the scope of this article.

While the Minnesota Alliance was scaling the peak of political success only to tumble from faulty footing, the North Dakota Alliance likewise fell into adversity. Action here followed the general pattern set in Minnesota. The Alliance published its grievances[46] and succeeded in electing a majority to the legislature of 1889 pledged to remedy them. As in Minnesota, the members of this majority promptly fell upon each other in civil war,[47] but they succeeded, nevertheless, in passing a law regulating elevators and grain buying. Their joy from this success was short-lived. A cleverly inserted "joker" killed one part of the law, and the Elevator Association of the State obtained an opinion from the attorney general which practically nullified the rest of it.[48] Here, as in Minnesota, the Alliance felt that it would be folly to work longer with the old parties and was ready to turn to more drastic methods.

Was the Alliance a success in the Northwest? The foremost authority on this organization answers with a qualified affirmative, and the evidence supports his conclusion. The Alliance had a number of specific achievements to its credit: the creation of a railway commission in Minnesota, which curtailed some of the harmful practices of the roads; and the introduction of a helpful degree of State regulation into the grain trade. Moreover, the vigorous, if often inept, agitation by the Alliance convinced the great interests that they must mollify public opinion

[42] The railroads and elevators were making open attempts to evade the laws passed against them in the 1885 session. *Pioneer Press*, Jan. 3, 1888.

[43] *Ibid.*, Aug. 29, 1888. This split again showed the division of the Alliance into pro- and anti-Donnelly factions.

[44] *Ibid.*, Oct. 12, 1888.

[45] The farm bloc introduced numerous bills to fix railroad tariffs, regulate elevators, and lower the legal rate of interest. Intensive lobbying helped to defeat all of them and also aroused loud accusations of fraud and corruption. *Labor Echo*, Feb. 23, and Apr. 20, 1889; *Pioneer Press*, Feb. 26, and Mar. 14, 17, 22, and 23, 1889; *Martin County Sentinel*, undated, quoted in *Pioneer Press*, May 16, 1889.

[46] *Ibid.*, Dec. 11, 1888. This program was almost identical with that of the Minnesota Alliance.

[47] *Ibid.*, Jan. 9, 1889.

[48] Fossum, *The Agarian Movement in North Dakota*, 34–36.

by abandoning some of their obvious abuses.[49] It is evident that the farmer profited both from the State regulation which he created and from the partial and grudging self-reform which he wrung from the railroads and the middlemen in the grain trade.[50]

Finally, it is important to remember that the Alliance must not be considered as an isolated phenomenon but as one of a series of protest movements which fought both a battle against privilege and a battle to awaken the people as a whole to the necessity of regulating private enterprise in the public interest. A large share of whatever success was won in these battles belongs to the Alliance.

The same judgment may be passed upon the Farmers' Union of the Canadian Northwest, brother to the Alliance. Like the latter, the Union was one of a series of movements that struggled through adversity to bring hostile and powerful interests under control and to give aid to the harassed farmer. Also like the Alliance, the Union grew out of discontent, for the Canadian Northwest received its afflictions in Jobian abundance. For one thing, the building of the Canadian Pacific Railroad had brought, as a byproduct, a frenzied land boom in the Northwest which reached the stage of delirium in and near Winnipeg. That city bulged, as the magnet of quick wealth drew thousands of economic soldiers of fortune to it.[51] Everyone seemed to be buying land on margin and using the proceeds of one transaction to finance the next; the value of choice lots often appreciated as much as 1000 percent a week![52] The inevitable crash came quickly, and it buried many in its economic wreckage. Local inhabitants did not recoup their losses for years; while outsiders were marooned, penniless, and had to remain in the Northwest where they constituted a floating, malcontented, and potentially dangerous class, faintly reminiscent of the Roman mob.[53]

Its slender capital already lost in the smash and replaced by debt, the Canadian Northwest soon found itself plunged into another disaster, the general depression of 1883. As a result of this depression, the price of wheat slipped so low that the producers' margin of profit nearly disappeared.[54] Yet another buffet was in store for this section in the form of a late summer frost which nipped much of the grain.[55] This and the depression prices rendered the situation desperate for the Northwest, for the sale of its staple, wheat, was the only means by which this region could recoup its losses from speculation. The Canadian farmer could neither defrost his wheat nor change its world price; his only recourse was to save as much of that price as possible for himself by reducing the assessments of middlemen upon the grain trade; his profits would vary inversely with theirs.

Thus the wrath and despair produced by multiple disasters was visited upon those who transported and marketed grain. As in the United States, the farmers singled out the railroad as their principal target. There was good reason for doing so. The Dominion government had, by contract, guaranteed the Canadian Pacific Railway a monopoly of railroad transportation to the Northwest for twenty years.[56] This extraordinary grant was given to insure the building of a transcontinental line entirely on Canadian soil, which would unite the economy of the Dominion on an east-west axis and would wither the vigorous and politically dangerous north-south trade lines with the United States.

[49] Among other things, railroad rates were voluntarily reduced, and some elevator competition was permitted. *Pioneer Press*, Feb. 13, 1884, Dec. 2, 1886, May 29, 1887, Dec. 11, 1888. See Lamphere, "History of Wheat Raising in the Red River Valley," 27, for a table showing rate reductions.

[50] *Labor Echo*, June 4, 1887.

[51] *Pioneer Press*, Mar. 25, 1882.

[52] Alexander Begg, *History of the Northwest* (Toronto, 1895), 3: 444–446.

[53] Lansdown to Derby, Ottawa, Apr. 2, 1884, Governor-Generals' Files, no. 191, vol. 1, in Public Archives of Canada.

[54] Canadian Parliament, *Debates of the House of Commons of Canada for 1887*, 444–446.

[55] *Pioneer Press*, Dec. 6, 1884; and Begg, *History of the Northwest*, 3: 85.

[56] *Statutes of Canada*, 44 Victoria, c. 1. The federal government had promised not to charter any railroad running within 15 miles of the American border in the Northwest. This effectively produced a monopoly, for there was yet no chance of a second Canadian transcontinental road, and the only possibility of competition was a connection at the border with American lines to the east. The Canadian Pacific men had demanded this concession as the price for building north of Lake Superior through the rocky and unsettled Laurentian Shield rather than utilizing existing American lines to the south of the lakes. It was the price Canada paid for an all-Canadian road. Arthur S. Morton, *History of Prairie Settlement* (Toronto, 1938), 65; and Sir George Stephen to Sir John A. Macdonald, Nov. 13, 1880, and Dec. 20, 1881, in Sir John A. Macdonald Papers, in Public Archives of Canada.

National policy might justify this concession, but it gave the Canadian Pacific a whip hand over the Northwest, an advantage which the railroad mercilessly exploited. As the depression of 1883 set in, the road drastically raised its rates until they were double those in the United States which were causing the Alliance to complain so bitterly.[57] This was a heavy and untimely tribute to levy upon a debt-ridden community. Moreover, it cast a shadow over the future of Manitoba. That province could not compete for immigrants with Minnesota and Dakota while the cost of its transportation was so much higher than theirs. Nor was the Canadian Pacific responsive to pleas for relief or sensitive to criticism of its policies. Too often it answered both with threats of punitive action.[58] It is little wonder that many Manitobans were deeply embittered against the road and that some of them were resolved to go to great lengths to gain freedom from its mastery.

Hostility to the railroad increased the bitterness resulting from another grievance, the land question. The Dominion government held title to the public lands in the Northwest, and its policy of disposal aroused protest. The authorities in Ottawa had heavily subsidized the Canadian Pacific with land; other choice blocks were granted to political favorites and to speculators.[59] The impression prevailed that this left little good land open to settlement, another deterrent to immigration. Moreover, the settled areas were badly broken up, interlaced with large blocks of land held off the market by speculators awaiting an increment in value.[60]

The land grievances, however, were of less importance than those against the elevators and grain buyers. These interests had established a monopoly situation, and there were no standard grades or government inspection to protect the producer.[61] The result was undergrading, mixing, and exorbitant charges and commissions.[62]

The tariff offered a further cause for discontent. Living in a pioneer community, the Manitobans had to buy many of their necessaries from the outside. If they purchased American goods, which many preferred,[63] the tariff raised the cost greatly. If they purchased Canadian products to escape this tax, they had to bring them from eastern Canada and pay the heavy transportation charges imposed by the Canadian Pacific. Thus the tariff and the Canadian Pacific gave the people of the Northwest a Hobson's choice and cost them dearly whatever their decision.[64]

The financial plight of Manitoba was also a cause for serious concern to its inhabitants. The British North America Act had deprived the province of certain revenues, giving them annual subsidies from the federal government in return. Manitobans complained that they received less proportionally than did the other provinces and that their payment from the federal government covered only half of the expenses of their local government.[65] This was not a complaint peculiar to Manitoba; all of the provinces grieved over the penuriousness of the federal subsidy and, with tears, launched movements for "Better Terms"—for which, read "More Money."

These grievances filled the minds of Manitobans and impelled them to act, for the western Canadian, like his American counterpart, adopted no philosophy of kismet toward his sufferings. When he was kicked, he kicked back.

The railroad monopoly, which interlocked with several other grievances, seemed to be the key log in this jam, and the Manitobans turned

[57] Harold A. Innis, *A History of the Canadian Pacific Railway* (Toronto, 1923), 175–176.

[58] *Toronto Globe*, Feb. 18, 1884; *Pioneer Press*, May 13, 1887.

[59] Toronto *Globe*, July 31, 1882; *Pioneer Press*, Nov. 15, 1883.

[60] *Ibid.* The cumbersome system set up by the Canadian government made it difficult for the settler to get title to land which he had "proved up" under the homestead provisions. Manitoba and North West Territories, Land Matters, I, in Macdonald Papers.

[61] North West Territories, 1883–1886, in Macdonald Papers; and *Pioneer Press*, Dec. 22, 1884.

[62] *Toronto Globe*, Jan. 8, 1884; *Pioneer Press*, Mar. 7, and Dec. 21, 1884.

[63] American agricultural implements were regarded as a necessity, for Canadian manufacturers did not produce models suited to the heavy soil and thick straw characteristic of prairie agriculture. Begg, *History of the Northwest*, 3: 62–63.

[64] Consular Despatches, Winnipeg, 6: 373, Department of State Archives, in U. S. National Archives; and Begg, *History of the Northwest*, 3: 62–63. The tariff was said to cost Manitoba $8.18 per capita each year as compared to 32 cents for the other provinces. *Manitoba Free Press*, Apr. 24, 1884

[65] *Pioneer Press*, Dec. 22, 1884; New York *Sun*, Feb. 28, 1884.

first to pry it out. Early in the 1880s, the provincial government chartered a railroad to run to the border and connect there with American lines to the east.[66] The federal government promptly disallowed this act on the ground that it violated the spirit of the Canadian Pacific charter and would release that road from its obligation to build the costly line north of Lake Superior.[67]

This frustration infuriated the Manitobans who considered it both an injustice and an invasion of provincial rights. With some of them, especially the ruined land speculators,[68] discontent soon lapsed into disloyalty; they began loudly to advocate the secession of the province from Canada and even its annexation to the United States.[69] Most Manitobans, however, rejected the weapon of threat and used legal and loyal instruments in seeking relief. They lacked cash and economic power, but they had numbers and votes and knew how to use them. They formed the Manitoba and North West Farmers' Union and issued a declaration of rights in December 1883, demanding local control of public lands, removal or lowering of the tariff on necessaries, and acknowledgment of the right of the Manitoba government to charter railroads within that province.[70]

It was soon obvious that this new organization, not exclusively agrarian in membership, commanded the support of practically the entire population of Manitoba.[71] Here was a potent force and one which no politician could afford to ignore, so the provincial premier, John Norquay, a Conservative, moved with alacrity to ally his government to the Union. Shortly thereafter, both the Union and Norquay sent missions to the federal capital where they pressed their demands upon Sir John A. Macdonald, the Conservative Prime Minister.[72] Macdonald was noncommittal in reply. He pointed out that he could make no immediate decision on their petition because he needed to study the complaints and because Parliament, which must approve any concessions, was not in session. He strongly implied, however, that he had no intention of rescinding the railroad monopoly or of giving a special and lower tariff to the Northwest.[73] So the Manitobans had to return, empty-handed, from the first of what proved to be a series of hegiras to Ottawa.

The Union did not accept this rebuff gracefully. Meeting in convention, its members heard the report of the delegation and vigorously vented their displeasure in various ways. The jackdaws of treason redoubled their shrilling for secession and annexation; and rumors of a rebellion in Manitoba and of a Fenian invasion from the United States to aid it were thick in the air.[74] The convention repudiated annexation by adopting a resolution of loyalty but promptly nullified the good effects of this action by entertaining a motion calling for the secession of Manitoba from the

[66] The provincial government did not consider itself bound by the monopoly pledge made by the federal parliament and stoutly insisted on its constitutional right to charter railroads between points in Manitoba.

[67] Macdonald to Andrew Simpson, Ottawa, Nov. 9, 1882, in Macdonald Letter Books, 22, in Macdonald Papers. Macdonald had warned John Norquay, provincial premier, that he would disallow such a charter if it were passed. Macdonald to Norquay, Nov. 5, 1881, in *ibid.*, 21.

[68] Macdonald to E. Wiman, Sept. 11, 1884, in *ibid.*, 23; and *Manitoba Free Press* Oct. 15, 1885.

[69] *Pioneer Press*, Nov. 16, 17, and 21, 1883; *Fargo Daily Republican*, Dec. 21, 1883; *New York Times*, Dec. 21, 1883. This movement probably caused no surprise in Ottawa, for the threat of annexation has often been used by disgruntled minorities in Canada in attempts to force concessions from the federal government. Many of these "annexationists" have patently been insincere, although there have always been some who were in earnest.

[70] North West Territories, 1883–1886, in Macdonald Papers. They also demanded a railroad to Hudson Bay, power for municipalities to build elevators and mills, and representation for the Northwest in the federal cabinet.

[71] Any rate payer might join the organization. The membership, like the population of the area, was largely rural, but sympathy with the Union was so general throughout the Northwest that the Canadian Pacific hastily and voluntarily lowered its rates by a quarter in a vain effort to head off action against itself. *Manitoba Weekly Free Press*, Jan. 10, 1884.

[72] Memorial of the Farmers' Union, Feb. 7, 1884, in North West Territories, 1883–1886, in Macdonald Papers.

[73] Begg, *History of the Northwest*, 3: 87.

[74] *Pioneer Press*, Feb. 18, 20, and 27, 1884; *Manitoba Free Press*, Feb. 21, 28, and Mar. 6, 1884; Toronto *Globe*, Feb. 23, 1884. This rumor was taken seriously by both the Canadian and American governments. See Diplomatic Notes, Great Britain, vol. 110, Department of State Archives, in the U. S. National Archives; and Aikens to Taylor, Winnipeg, Feb. 29, 1884, in the James W. Taylor Papers in the Minnesota Historical Society.

Dominion if Ottawa did not do them justice.[75] Though the resolution was later withdrawn, the damage had been done. Canadians outside the province began to suspect the loyalty of the Union.

Having injured its reputation elsewhere, the Union completed a full day's work by shattering the solid block of support which it had enjoyed at home. It did this by unwisely and unanimously adopting a motion which stated that immigrants could not be advised to come to Manitoba as long as the burdens imposed on that province precluded profitable agriculture.[76] This resolution provided the ultimate in bad publicity for a province that was bending every effort to attract settlers. Many who had loyally supported the Union repudiated its leadership after this blunder.[77] By discrediting the province outside, the Union had discredited itself in Manitoba.

While the Union was thus busily digging its own grave, the government in Ottawa was considering the petition of grievances submitted to it earlier. Macdonald was painfully impaled on the horns of a dilemma. He wished to keep Manitoba in the Conservative column; but the price for doing this would include concessions which might endanger the completion and operation of the Canadian Pacific to whose success the future of his own government was irrevocably lashed. He attempted to buy his way off this uncomfortable position, proposing to give financial concessions to the province but refusing to alter his railroad, land, and tariff policies.[78] He also cannily insisted that the acceptance of his offer would constitute a quitclaim against the right of Manitoba to agitate for further redress. Norquay refused this offer. Indeed he felt that he had no real choice, for he was convinced that his constituents would immediately overturn a government that sold its rights for this mess of pottage from Ottawa.

Thus the Union in the first stage of its career had apparently accomplished nothing and had even retrogressed. It had not secured the redress of a single grievance; it had lost the solid support of Manitobans; and its loyalty was strongly suspected outside.

Undaunted by this discouraging situation, the Union continued its campaign of organization and agitation throughout 1884.[79] Its efforts had effect. Macdonald realized that the Union was in earnest and that it might cost him the vote of Manitoba unless he appeased it. Early in 1885 he repeated his offer of the previous year and added several new concessions. Again he was adamant in refusing to concede the major points, but he apparently did allow the rumor to circulate that the monopoly clause of the Canadian Pacific contract would be repealed as soon as the road was completed and in operation.[80]

Although the Union demanded the rejection of this offer, Norquay accepted it, for he was emboldened by the assurance that the monopoly would soon be ended and by the fact that many Manitobans had repudiated the organization. This action aroused great resentment, and the disloyal elements took advantage of it to redouble their activities in the hope of gaining control of the Union at its approaching convention. Once more they failed to do so,[81] but once more their loud activity deepened the suspicion with which the whole organization was regarded throughout Canada. This suspicion proved deadly because the punishment for the sins of the annexationists was soon visited upon the entire Union. Shortly after the above-mentioned convention, the Riel Rebellion broke out in the North West Territories. This uprising was confined to the metis and Indians and had no connection with the Union. The interests which opposed and feared that organization, however, knew opportunity when they heard her knock. They promptly cried out that the Union had amply demonstrated its disloyalty in the past and obviously must be behind this revolt in its section of the country. The accusation was unjust,[82] and the leaders of the organiza-

[75] *Pioneer Press*, Mar. 7, 1884.

[76] *Ibid.*

[77] The people of Winnipeg were particularly incensed at the resolution and denounced it and its authors without restraint. Begg, *History of the Northwest*, 3: 90.

[78] *Pioneer Press*, May 10, 1884; Toronto *Globe*, May 29, and June 2, 1884. The concessions included a higher subsidy (by indirect means) and the possibility of aid in building the Hudson Bay railroad.

[79] Begg, *History of the Northwest*, 3: 115.

[80] The new concessions were financial and would increase the provincial subsidy. *Pioneer Press*, Feb. 24, 1885.

[81] *Manitoba Free Press*, Mar. 12, 1885.

[82] I have not found any evidence to connect the Union with this uprising. It may, unconsciously, have been an indirect cause for it is possible that its agitation convinced Riel that the whole Northwest—white, Indian, and metis—was ready to rebel and thus encouraged him to start his revolt. Norman Fergus Black, *A History*

tion hotly denied it. But it was of no use, for the taint of disloyalty imparted by the minority of annexationists had so poisoned the minds of many Canadians against the entire organization that they were convinced that the Union had indeed instigated the revolt. So, despite its protests, that organization was tried and condemned by public opinion. Destroyed as an effective instrument, it lingered on for a time but almost without influence or power.

If immediate and significant results are the criteria of success, the Union had failed. It had not achieved a single one of the major reforms demanded in its declaration. Such a judgment, however, would be incomplete and unfair. The Union had organized the people of Manitoba, formulated their platform of grievances, and led their first faltering steps toward reform. Then it died an untimely death, but its enemies could not lay its ghost, for Manitobans continued, even without it, ceaselessly to fight for the rights which it had taught them to demand.[83] Pressed by this relentless public opinion, the government of Manitoba sent delegation after delegation to Ottawa seeking redress. Undismayed by federal disallowances, it chartered railroad after railroad to bring competition in transportation that it thought would be the economic salvation of the province.[84] Such persistence could have only one result; Macdonald wearied under this close siege and capitulated in 1888, informing the provincial government that he would no longer disallow their railroad charters.[85] A road was soon constructed to the American boundary, and the hated monopoly was ended. The Union, by then defunct, could not receive its share of the laurels of this victory but deserves its share of the credit. The general who wins the battle must divide his glory with the general who organized and vitalized the triumphant army.

Even so short a description of the Farmers' Union makes apparent the strong resemblance between it and the Farmers' Alliance; a brief summary will serve to point up this resemblance.

Both organizations sprouted from the fertile soil of agrarian discontent, and the specific grievances which motivated their activities were identical: railroad monopolies, rates, and practices; land abuses; high tariffs breeding trusts and raising the prices of the necessaries that the farmer bought; elevators and buyers who employed identical devices on both sides of the line to exact heavy tribute from the grain trade. Both organizations used the same strategy in warring upon these enemies. Each was a mass organization using political action and pressure-group techniques. Each succeeded in achieving a dominant position in its section, and each promptly spoiled its chances for immediate and major success by foolish errors of inexperience. The Alliance split over personal jealousies; and the Union allowed itself to become a buzzards' roost for the disloyal and desperate because it too complacently accepted them into its ranks and tolerated their activities, which reflected fatal discredit upon the whole organization. Neither the Union nor the Alliance accomplished its stated aims, but both brought some amelioration of the conditions of the farmer. And, finally, each was significant as a phase in the persistent agrarian radicalism found on both sides of the line in the West and in the movement for government regulation of business.

In summary, it may then be said that the two organizations were not twins, for they differed on minor points; but they were brothers, for their important characteristics were the same. And it should be mentioned again that Union and the Alliance were independent and unconnected. Their fundamental identity was the product of a common milieu and of common problems, not of conscious imitation. Thus they stand as one of many examples which might be used to illustrate the same point—that Canadian history and American history are often closely interwoven, and that the threads in their pattern are continental and not national.

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of Saskatchewan and the Old North West (Regina, 1913), 259–260; and Morton, *History of Prairie Settlement*, 95.

[83] The Canadian Pacific was completed in 1885, but, contrary to expectation, its monopoly was not abrogated. This, of course, revived popular agitation more strongly than ever.

[84] The story of this continued effort to end the monopoly is too complicated to include here. See Begg, *History of the Northwest*.

[85] Macdonald to Thomas Greenway, Mar. 30, 1886, in Macdonald Letter Books, 24, in Macdonald Papers. Greenway was the new (Liberal) premier of Manitoba. The railroad was compensated for its loss of the monopoly privilege by being given a government guarantee of 3½ percent interest on $15,000,000 of bonds which it was issuing at the time. Governor-Generals' Correspondence and Files, 191, vol. 1, 1884–1888, in Public Archives of Canada.

THE KINKAID ACT AND ITS EFFECTS ON WESTERN NEBRASKA

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In 1878 J. W. Powell, who was in charge of the United States Geographical and Geological Survey of the Rocky Mountain Region, made his *Report on the Lands of the Arid Region of the United States*. In regard to the lands of the semiarid to arid High Plains region Powell wrote:

> The grass is so scanty that the herdsman must have a large area for the support of his stock. In general a quarter section of land alone is of no value to him; the pasturage it affords is entirely inadequate to the wants of a herd that the poorest man needs for his support.
>
> Four square miles may be considered as the minimum amount necessary for a pasturage farm, and a still greater amount is necessary for the larger part of the lands. . . .[1]

This report took cognizance of the fact that the usual method of granting homesteads in 160-acre tracts to actual settlers did not work satisfactorily in the arid and semiarid regions of the High Plains and Rocky Mountains of the United States. The homestead law had been written to distribute the lands of the humid areas to the east of the 100th meridian, and it made no provision for increasing the quantity of land granted to the patentee as the quality decreased due to scarcity of rainfall.

Settlers rushed into western Nebraska during the decade of the 1880s, filed on 160-acre homesteads, built small shacks or soddies on their claims, and attempted to cultivate the land.[2] The population of the region, which later became known as the Kinkaid area, increased 877 percent from 1880 to 1890.[3]

However, this tremendous influx of population was not destined to continue, as the region in the early nineties experienced disastrous drouths. Thousands, who had so enthusiastically rushed in to settle upon and cultivate their claims just a few years before, now found that 160-acre homesteads were entirely inadequate to support families. Their crops were destroyed by the hot summer winds and the lack of moisture. The dry years coupled with the panic of 1893 made it humanly impossible for many of the pioneers to remain and continue the fight against the elements on 160-acre homesteads.[4] Between 1890 and 1900 over 10 percent of the settlers either relinquished or abandoned their claims and returned back east.[5]

In the election of November 1900, the candidate of the Populist Party, William Neville of North Platte, defeated Moses P. Kinkaid of O'Neill for the congressional seat from Nebraska's Sixth District by a very small majority.[6] Kinkaid, however, won in the election two years later.

As a means of offsetting the decrease in population of the nineties, Neville in April of 1902 introduced in the House of Representatives a bill to amend the homestead law to allow an entryman to take a homestead of 1,280 acres in the arid and nonirrigable lands west of the 100th meridian. The bill was referred to the Committee on the Public Lands but was never brought back to the floor of the House.[7]

At this time the people of Nebraska were far from being unanimously in favor of such legislation. On April 8, 1902, the *Alliance Times* mentioned that Neville had awakened long enough to introduce a bill and remarked: "To have made the

[1] U. S. Geographical and Geological Survey of the Rocky Mountain Region, *Report on the Lands of the Arid Region of the United States . . .*, by J. W. Powell (45 Congress, 2 session, *House Executive Document 73*, serial 1805, Washington, 1878), 21–22.

[2] *Alliance Times*, Jan. 23, 1903, p. 2; and personal interviews with F. M. Broome, the receiver of the Alliance Land Office, 1892-97, and of the Valentine Land Office, 1916–20; H. J. Ellis, the receiver of the Alliance Land Office, 1904–14; and O. E. Forsling who settled in Kimball County in 1887.

[3] U. S. Census Office, 11th Census, 1890, *Report on Population of the United States*, 1: 224–235.

[4] Addison E. Sheldon, *Land Systems and Land Policies in Nebraska* (Nebraska State Historical Society, *Publication 22*, Lincoln, 1936), 144–145; and *Alliance Times*, Jan. 23, 1903, p. 2.

[5] U. S. Census Office, 12th Census, 1900, *Population*, 1: 251–263.

[6] *Western Nebraska Observer* (Kimball), Nov. 15, 1900, p. 1.

[7] *Congressional Record*, 57 Congress, 1 session, Apr. 5, 1902, 35(4): 3751.

bill complete it should provide that the homesteader should also be given half a dozen yellow dogs, as everybody knows that the more one has of either the worse off he is."[8]

The idea of enlarging the homestead unit apparently had very few adherents in Nebraska prior to 1902. Very little appeared in the public press on the question, and almost nothing had been published concerning it prior to the introduction of Neville's bill. By the fall of 1902 the *Alliance Times* favored the passage of some type of legislation to settle the public land problem. In an editorial in the October 17 issue, the editor declared:

> There is no question that the old homestead law passed away back in 1862 is a dead letter. . . . It should be amended or a substitute for it passed. There is not a quarter section of land west of the 100th meridian on which a man could make a living. The question then for Congress to consider is how shall the remaining part of the public domain be disposed of to the best advantage of all concerned.[9]

The editorial then reviewed three possible ways of solving the problem, namely offering the arid grazing lands for lease for a term of years to the highest bidder, increasing the size of the homestead from 160 to 640 acres, and selling outright the land in unlimited quantities to the highest bidder at the minimum price of $1.25 an acre.

On January 23, 1903, the *Alliance Times* pointed out that all of the land of western Nebraska had been subject to entry for at least twenty years and that the railroads traversing the region had furnished easy access to the land for ten years but that homesteaders had refused to take up the lands because they realized there was not a quarter section of unentered land in Nebraska that could possibly support a family. The article advocated the disposal of the lands by sale to the highest bidder or by granting a homestead large enough so that it would be worthwhile for the entryman to spend his time and money in its development.[10] On January 30 the *Times* stated that public opinion was crystallizing in favor of the enlargement of the homestead as the best means of disposing of the semiarid regions.[11]

President Theodore Roosevelt in his annual message in 1902 called to the attention of Congress the public land problem and the necessity of settling it. He stated that the "steady development of the West depends upon the building up of homes therein." He pointed out, however, that home building was impossible under the existing law which allowed only 160-acre homesteads in an area so dry that the land is only capable of supporting, at the most, 1 head of cattle to every 10 acres.[12]

The President appointed a Public Lands Commission in October of 1903 "to report upon the condition, operation, and effect of the present land laws." The commission made a partial report on March 7, 1904, which stated that it was the prevailing opinion in the West and in Washington "that the present land laws do not fit the conditions of the remaining public lands." The commission emphasized that most of the laws and the departmental practices had been framed to meet the needs of the humid regions while the remaining public lands were for the most part arid in character. This made the existing laws antiquated and no longer suited "for the most economical and effective disposal of lands to actual settlers."[13]

On April 6, 1904, one month after the Public Lands Commission reported, Moses P. Kinkaid, who was serving his first term in Congress as the Representative of Nebraska's Sixth District, introduced in the House of Representatives a bill which was destined to change materially the whole history of the western two-thirds of his State. This bill "to amend the homestead laws as to certain unappropriated and unreserved lands in Nebraska" was referred to the Committee on the Public Lands.[14]

The committee amended the bill and reported it favorably to the House on April 13. Kinkaid's original bill had provided for 1,280-acre homesteads, but the committee limited the size to 640 acres. Although the 2-section homestead "was earnestly urged by those having knowledge of con-

[8] *Alliance Times*, Apr. 8, 1902, p. 2.
[9] *Ibid.*, Oct. 17, 1902, p. 2.
[10] *Ibid.*, Jan. 23, 1903, p. 2.
[11] *Ibid.*, Jan. 30, 1903, p. 2.

[12] *Congressional Record*, 57 Congress, 2 session. Dec. 2, 1902, 36(1): 11.

[13] *Report of the Public Lands Commission* (58 Congress, 3 session, *Senate Document 189*, serial 4766, Washington, 1905), iii-v.

[14] For the proceedings on the bill in the House of Representatives, see *Congressional Record*, 58 Congress, 2 session, Apr. 6, 13, and 18, 1904, 38(5): 4409, 4782, 5006–5009. For the committee report, see *Certain Unappropriated and Unreserved Lands in Nebraska* (58 Congress, 2 session, *House of Representatives Report 2452*, serial 4583).

ditions in the area in question," the committee felt that, since the bill changed so materially the former homestead law, it would be wise to experiment first with a 640-acre unit to see what effect it would have upon settlement and homebuilding. In recommending the bill, the committee stated that increasing the size of the homestead would tend to compensate the homesteader in quantity of land for what it lacked in quality and productiveness.

The committee report emphasized that for thirty-five years the lands to which the bill applied had been open for settlement, but homeseekers had continually passed over them, locating only on the quarter sections which they believed were good enough to support a family, and this selection had left open for settlement only the semiarid grazing lands which could not be farmed profitably in 160-acre tracts. In numerous cases homesteaders who had filed on 160-acre homesteads had done so only to obtain title to the land which they acquired by devious means and then sold to the large cattlemen. The committee believed that this legislation would encourage settlement by bona fide homeseekers in 640-acre tracts and would tend to forestall the passing of the lands into large holdings. Due to the increase in the size of the homestead, it was recommended that the bill be amended to provide that the entryman must place "permanent improvements upon his land to the extent of at least $1.25 an acre for each acre entered."

On April 18, Kinkaid requested that the bill with the committee amendments be passed. He explained that it was "a bill for the disposition of sandy and arid lands in western Nebraska." He pointed out that, due to the arid nature of the region, settlers had refused these lands ever since they had been surveyed and that the final survey had been completed for more than twenty-eight years.

James M. Robinson of Indiana asked Kinkaid how much of the land in adjacent States was of the same character. Kinkaid answered that no area in the United States was entirely similar because homesteaders had refused to settle on these lands in 160-acre tracts for the past fifty years. He pointed out that this was a transition area between the humid region of the East and the arid region of the West, and due to the sandiness of the soil and the aridity homesteaders had refused to settle here. He referred to the desire of the State of Nebraska to get the lands into the hands of individuals and thus make the lands taxable, to end the controversies over them, and to build up communities and homes.

Robinson then asked what use was being made of the lands either legally or illegally. "They are practically subject to use by anybody," replied Kinkaid, and he went on to say that the part not fenced was regarded as commons, but much of the area had been illegally fenced and some users had been indicted for violations of the fencing law.

Kinkaid discussed the objection that the legislation would inaugurate a bad precedent for the distribution of the remaining unappropriated public domain and stated that the difficulties resulted from the fact that many felt that, having started with a 160-acre homestead, no change should be made. He argued that no single homestead law could possibly conform to all of the variations in climate, soil, and topography in the United States, and therefore, the law should be amended to meet the exigencies of the various regions.

Kinkaid maintained that the soil of the region, particularly of the rejected lands which were still open to settlement, was too sandy to cultivate, and the altitude of 2,000 feet in the east to over 5,000 feet in the west was too great to allow irrigation by means of the few small streams which flowed through the area. He pointed out that any lands which could possibly be irrigated were excluded from entry by the provisions of the bill. Kinkaid stated that, as a result of the undesirableness of the land, the person who took a 160-acre homestead usually had to sell out to a large landholder or rancher after a few years, and consequently the population was decreasing. In conclusion, he said that he did not fear that the bill would grant too many acres to the homesteader in the region, but rather that it would grant too few by 100 percent. He also mentioned that his original bill provided for a 2-section homestead but that the Committee on the Public Lands had amended it to provide for a single section.

The rules were suspended, and the bill was passed with the committee amendments.

The bill then went to the Senate where it was referred to the Committee on Public Lands.[15] On

[15] For the action on the bill in the Senate, see *Congressional Record*, 58 Congress, 2 session, Apr. 19, 21, 1904, 38(6): 5060, 5242–5243.

April 21, Senator Charles H. Dietrich of Nebraska reported the bill for the committee with four minor amendments. He spoke briefly for the bill, saying that it applied only to approximately 9,000,000 acres of arid lands in Nebraska, which were mostly sand hills. He declared that the legislation provided for the enlarging of the homestead unit to 640 acres because the character of the land made it impossible to make a living on 160 acres. Senator Henry M. Teller of Colorado inquired if the bill applied only to Nebraska, and Dietrich assured him that it applied only to the western portion of that State. As there were no further questions, the bill was read a third time and passed.

Conference committees were appointed to iron out the differences between the two bills, and both houses accepted the conference report on April 26. President Roosevelt signed the bill on April 28, 1904.[16]

This is briefly the legislative history of the bill which ever since has been known as the Kinkaid Act.[17] It applied to approximately the northwestern two-thirds of the State of Nebraska, and the entire area involved was west of the 98th meridian. The act provided that the homestead unit should not exceed 640-acres and that any lands which were irrigable should not be open to entry. Homesteaders in the territory who occupied the lands that they had already entered were permitted to enter other contiguous lands up to 640 acres in the aggregate, and residence on the original was to be considered as equivalent to residence on the additional land. However, final proof on the additional land could not be made until five years after entering the same. Due to the enlargement of the unit, two innovations in homestead legislation were incorporated into the law. The commutation provision of the existing law was not to apply, and the entryman would have to prove that he had placed permanent improvements upon his claim to the value of $1.25 an acre before he would receive his patent. The Kinkaid law was the first specific effort to settle the land problems of the High Plains.

It was the feeling of many in both Houses of Congress that the measure was intended to assist large cattle interests to fraudulently acquire vast tracts of the public domain. Only through the unrelenting efforts of Kinkaid to favorably influence the public lands committees of both Houses, the President, and the members of Congress was the bill enacted. The fact that the bill was experimental and only applied to a comparatively small area (nearly all of the land was within the congressional district that Kinkaid represented), doubtlessly helped to secure its passage.

When the Kinkaid law went into effect on June 28, 1904, the area included under its provisions was served by seven United States land offices, which were located at Alliance, Sidney, O'Neill, McCook, Broken Bow, North Platte, and Valentine. On the first day that 640-acre homesteads were obtainable, people surged upon each of these local land offices to file Kinkaid claims.

Early in May the *Alliance Times* mentioned that unusual activity was noticeable around the local land office and that the register and receiver were kept busy answering inquiries about the new law. The article stated that for the first time in several years there was intense interest in land matters and that a number of contest cases were being filed against existing homesteads.[18]

On the eve of the day set for the Kinkaid opening, a crowd began to form in front of the land office at 10 p.m. Fifty applicants remained in line throughout the night, and by the time the office opened on June 28, there were about 400 men and women waiting to file claims. During the first day, 180 applications were taken, but many who desired to file still remained in line. When evening came, each person was given a number to enable him to retain his place in the line without having to stand there all night. The *Times* estimated that the rush for homesteads would likely continue at least until the end of the week.[19]

The original line of applicants was not taken care of until 3 p.m. on June 30. The *Times* reported on July 1 that the exciting scenes were over but that a steady stream of applicants were still making entries. The paper complimented the homeseekers on the perfect order they had maintained and remarked that hardly a quarrel had been heard and that there had been no contention over any of the land.[20] The July 9 issue stated that business continued lively at the land office and that a total of 1,769 applications for

[16] *Ibid.*, Apr. 26, 1904, 5601, 5636–5637, 5846.
[17] *U. S. Statutes at Large*, 33: 547–548.
[18] *Alliance Times*, May 3, 1904, p. 1.
[19] *Ibid.*, June 28, 1904, p. 1.
[20] *Ibid.*, July 1, 1904, p. 1.

homesteads had been made since the Kinkaid law went into effect, but that some of the entries would be rejected for various reasons.[21]

Later reports listed a much smaller number of Kinkaid entries that had been actually accepted by the land office. The August 2 issue of the *Times* reported that 610 entries had been made during July.[22] On August 19 the paper stated that 1,184 filings had been accepted since the Kinkaid law became operative on June 28. Of these 106 occurred on the last three days of June; 611 in July; and 467 in August.[23] During September a total of 392 filings were accepted and during October, 333.[24] In March 1908 the *Times* reported that all of the business of the Alliance Land Office had been finally brought up to date for the first time since the great rush that occurred at the Kindaid opening in 1904.[25]

Similar conditions prevailed at the other land offices. Many of the entrymen were strangers who had migrated to the filing place only a week or two prior to the day of the opening; other applicants were settlers and stockmen, who already lived in the district and were making second entries to increase the size of their homesteads to 640 acres.

In January 1905, the *Western Nebraska Observer*, published at Kimball, emphasized the residence requirement of the law, reiterating that the entryman must maintain actual residence on the land to the exclusion of a home elsewhere, and pointed out that many of the homesteaders had erected shanties on their claims but were not living on the premises. The paper anticipated that all entrymen would establish their residence on their homesteads when spring and summer came.[26] However, this was not the case, and in the summer it was reported that in a majority of cases very little in the way of improvements had been made and that only a few entrymen had taken a claim in good faith and with the intention of establishing a home. The editor suggested that there were many entries open to contest due to the entrymen failing to comply with the law.[27] In December of the same year, the *Observer* reported that the remaining vacant land in Kimball County was being rapidly taken by homesteaders and that most of the filers intended to establish homes on their claims in the spring.[28]

Two years after the Kinkaid opening, the *Observer* reported that the houses of the Kinkaiders could be seen all over the countryside and that the settlers were filled with hopes for the future.[29] However, two months later the editor complained that although more than two years had elapsed since the filing for Kinkaid homesteads there were still a number of claims which showed very little in the way of improvements. He described the improvements on some places as being no more than a rough board shanty and a few acres broken for a sham and demanded that such claims be cancelled and "actual homesteaders" be given a chance to get homes.[30] A few weeks later the *Observer* again discussed the establishing of actual residence on the claims and pointed out that many new settlers were coming in and land prices were advancing and warned Kinkaiders to be certain that they complied with the law in every detail in order to prevent contests being filed against their claims.[31]

The homesteader in most cases was a poor man and had difficulty establishing his residence and making the necessary improvements on the land. The Commissioner of the General Land Office, in deciding a case in 1908, stated that each entryman had to fulfill the contract with the government to live on his claim for five years. He stated that scanty belongings necessitated by lack of means were excusable but that the homestead should show increasing improvements each year as evidence of the entryman's intention to develop and utilize the agricultural possibilities of the land.[32]

Some of the settlers had enough financial means to enable them to quickly transfer the raw Nebraska prairie into a comfortable and profitable home. In March 1910, the *Observer* described the improvements on one of the better homesteads in Kimball County. The entryman had lived on his claim for one year, and his improvements, in addition to 40 acres under fence, consisted of a 4-room house, a barn, a hen house, a well, and a

[21] *Ibid.*, July 9, 1904, p. 1.
[22] *Ibid.*, Aug. 2, 1904, p. 1.
[23] *Ibid.*, Aug. 19, 1904, p. 1.
[24] *Ibid.*, Nov. 4, 1904, p. 1.
[25] *Ibid.*, Mar. 20, 1908, p. 1.
[26] *Western Nebraska Observer*, Jan. 26, 1905, p. 3.
[27] *Ibid.*, June 29, 1905, p. 4.
[28] *Ibid.*, Dec. 14, 1905, p. 1.
[29] *Ibid.*, June 7, 1906, p. 1.
[30] *Ibid.*, Aug. 2, 1906, p. 3.
[31] *Ibid.*, Sept. 7, 1906, p. 1.
[32] *Ibid.*, Aug. 6, 1908, p. 3.

windmill.[33] A month later the *Observer* mentioned the large amount of building that was going on all over Kimball County and stated that lumber was being hauled out by the wagonload to the Kinkaiders.[34]

Many of the younger entrymen left their wives and children alone on the homestead during part of the year and went to work in the potato fields of Colorado and on the sheep ranges of Wyoming in order to earn money to supplement the family income and make the required improvements on their claims.[35]

Interest in filing had become almost negligible by late 1912 as nearly all of the government land in Nebraska had been taken by that date. In the Valentine land district 19 sections of sandhill land remained, but they were all located from 20 to 25 miles from the nearest railroad. In the Alliance district 25 sections were still subject to entry, but most of them were along the Wyoming border and were so rough and mountainous that they were considered practically worthless even for grazing purposes. The balance of the vacant land was in the Broken Bow land district but only included a few small scattered tracts, none of which were over 160 acres.[36]

Many entrymen failed to establish their residence on their claims within six months after filing or failed to continue to reside on the land until they obtained final proof and thereby ran the risk of having a contest suit filed against their entries by either an individual or the Federal Government. A private citizen could file a contest affidavit in the local land office against a homestead entry alleging either that the entryman had never established his residence or, if established, that it had later been abandoned. In such cases the original entryman was notified to appear for preliminary hearing before the clerk of the district court in the county in which the land was located. Later he had to appear before the register and receiver of the district land office for final hearing to show why his entry should not be cancelled.[37] If the entry were cancelled, the person who had brought the contest suit had a preferential right to file for the same for thirty days. In case the contestant failed to file within that time the land was then subject to entry by the first qualified applicant.[38]

The homestead law provided that an entryman could make final proof and obtain patent or title to his claim after he had lived on it for five years. This was changed to three years by the Three-Year Homestead Act of 1912.[39] The procedure was slightly modified from time to time during the period covered by this article, but in general the Kinkaider proceeded as follows in making his final proof. He first took the receipt which he had received when he made his original entry to the county clerk or county judge in the county in which he lived or to the district land office to make application for final proof. On this application the entryman stated the actual date that he had established his residence on his claim.[40] The land office would set a date, usually about two months later, and a place for the hearing of final proof. The proof could be made before any United States commissioner, before a judge or clerk of any court of record in the land district, or before the officials of the district land office. A notice of intention to make final proof had to be published for six consecutive weeks in a newspaper of general circulation in the county in which the land was located. The notice described accurately the piece of land, stated before whom the proof was to be made, and named four witnesses who would swear that the provisions of the Kinkaid Act had been fulfilled.[41]

The district land office sent a copy of the notice to the chief of the field division at Cheyenne, Wyoming, who was in charge of the work of the special agents in the Middle West. A special agent visited the land, estimated the value of the improvements, and inspected the claim thoroughly to satisfy himself that it was a case of bona fide homesteading and not merely an effort to gain title to the land. If the agent found that the im-

[33] *Ibid.*, Mar. 24, 1910, p. 4.

[34] *Ibid.*, Apr. 28, 1910, p. 1.

[35] Asa Butler Wood, *Pioneer Tales of the North Platte Valley and Nebraska Panhandle* (Gering, Nebr., 1938), 123.

[36] *Alliance Times*, Dec. 10, 1912, p. 1; and *Western Nebraska Observer*, June 20, 1912, p. 1.

[37] *Western Nebraska Observer*, May 3, 1906, p. 1.

[38] *Alliance Times*, Oct. 6, 1908, p. 3.

[39] *U. S. Statutes at Large*, 37: 123.

[40] *Western Nebraska Observer*, June 20, 1912, p. 1; and U. S. General Land Office, *Circulars and Regulations of the General Land Office . . .*, compiled by C. G. Fisher (Washington, 1930), 546–547.

[41] *Western Nebraska Observer*, May 4, 1909, p. 4, and June 20, 1912, p. 1; and U. S. General Land Office, *Circulars and Regulations*, 546–547.

provements were sufficient and that there were no traces of fraud in the entry, he so reported to the chief of the field division and the latter to the register of the local land office.[42]

At the appointed hour the Kinkaider, accompanied by two of his witnesses, appeared before the officer who was to hear the final proof. He had to declare just what improvements he had made on his land; how much, if any, he had broken each year; what he had planted; and how much he had harvested on the part that had been broken. The witnesses had to swear that the entryman's statements were correct and that he had fulfilled all of the provisions of the law. They also had to fill out a blank showing the improvements and the value of the same on each subdivision of the entry, which was calculated to show complete familiarity with the land by those testifying.[43]

If the proof had been satisfactory and no protest had been entered by the special agent or by a private citizen, the homesteader received a final certificate from the district land office. He could then borrow money on his land or even sell the same, although it usually took from four months to a year more before the government sent out his patent.[44]

Since the Kinkaid law did not become effective until June 28, 1904, no land could have been alienated under its provisions until June 28, 1909, but the General Land Office has no definite record of the number of Kinkaid patents granted prior to November 1910. Some 1,600 patents were granted for approximately 800,000 acres in the Kinkaid area prior to this date. How many of these final proofs were made upon Kinkaid claims and how many under the provisions of the regular homestead law is indeterminable. A total of 18,919 patents were granted for 8,933,527 acres between November 1910 and the close of the 1917 fiscal year. After 1917 the acreage annually alienated rapidly declined as most of those who had filed Kinkaid claims or made additional entries under the provisions of the law had completed their final proofs. However, as late as 1941 one Kinkaid patent was issued for a 40-acre additional entry.[45]

In evaluating any legislation it is worthwhile to consider its effect upon the area where it applied. Although many individuals were skeptical and often actively critical, local editorial opinion for the most part favored the law. The *Western Nebraska Observer*, in reporting the passage of the bill, stated that the legislation would be very beneficial for western Nebraska. The *Observer* foresaw the settling of many of the existing disputes over ranges and fences as it anticipated that the land would shortly be taken up by settlers who would build up permanent homes.[46]

In discussing the benefits that western Nebraska would derive from the passage of the Kinkaid law, the editor of the *Alliance Times* mentioned the publicity that the region obtained by reason of the enactment and stated that it would likely result in a considerable influx of settlers. The editor visioned settlement by self-supporting people, who would bend every effort to successfully homestead the region, inasmuch as the amount of land that they could prove up on would be enough to repay them for their time and effort. Since the lands would ultimately become taxable, he pointed out that the legislation was beneficial not alone to the western part of the State where it applied but to the whole State of Nebraska. The editorial cautioned that many of the old-time settlers maintained that the legislation would fail to bring about permanent settlement but stated that a majority of the citizens were expecting the final outcome to be advantageous to western Nebraska.[47]

Following the first great rush for Kinkaid homesteads, the *Alliance Times* stated that it must be anticipated that the legislation would result in dissatisfaction and inconvenience for a time. The large ranchmen would naturally be disposed to criticize the law, as it would limit the grazing privileges which they formerly had unlawfully enjoyed. Many entrymen would rush in and attempt to farm by methods adapted only to the more humid regions and would consequently fail. However, it was believed that eventually the Kinkaid law would prove to be satisfactory and advantageous

[42] *Alliance Times*, Feb. 11, 1910, p. 5; and U. S. General Land Office, *Report of the Commissioner*, 1912 (62 Congress, 3 session, *House Document 933*, serial 6408, Washington, 1913), 122.

[43] *Western Nebraska Observer*, June 20, 1912, p. 1; *Alliance Times*, May 4, 1909, p. 3; and U. S. General Land Office, *Circulars and Regulations*, 546–547.

[44] *Western Nebraska Observer*, June 20, 1912, p. 1; and *Alliance Times*, Feb. 11, 1910, p. 5.

[45] Letter from Fred W. Johnson, Commissioner of the General Land Office, July 21, 1942.

[46] *Western Nebraska Observer*, Apr. 28, 1904, p. 2.

[47] *Alliance Times*, May 10, 1904, p. 4.

to all concerned. It was expected that through settlement the taxable wealth would be greatly increased, which would lighten the tax burden for those already in the region. The population of western Nebraska would be augmented substantially, and the benefits derived from the act would be enjoyed by the farmer, the tradesman, and the rancher, and soon all would rise up and say "Blessed is Moses."[48]

The *North Platte Weekly Telegraph* praised the Kinkaid law in glowing terms and stated that by its provisions many had been able to get a start in farming who otherwise would never have had an opportunity to improve their economic condition. The editor stated that the land had formerly been used for grazing purposes by parties who had no title or claim to the same. He welcomed the coming of Kinkaid settlers who, he hoped, would be able to subdue the land and make it yield to the influences of civilization. It was expected that a number of years would be required to develop a well-rounded farm program, and the suggestion was made that the zealous homesteader, who rightly appreciated his claim, would leave a majority of it in pasture, put part in hay, and cultivate only a small part.[49]

Two years after the passage of the act, the *North Platte Telegraph* listed the advantages that western Nebraska enjoyed as a result. The article reviewed the rush of land seekers from every State in the Union to Nebraska to take up Kinkaid claims and the consequent substantial population growth in the region. Merchants of all types, particularly implement dealers, had experienced their most profitable months as their businesses had increased as never before. A region must have people to prosper, and if the homesteaders had not rushed in and taken Kinkaid claims, western Nebraska would still be jogging along in the same old way. Attention was called to the fact that the lands offered for homesteading were the best in the country for stock raising and that a 640-acre homestead was the best method available anywhere for a man to get into the stock-raising business.[50]

In May 1910 the *Western Nebraska Observer* reported that settlers had come in by the thousands and that the ranges, where great herds of cattle had formerly roamed, had been broken up by the Kinkaiders who were cultivating the land. The article praised the homesteaders as being energetic, intelligent, and progressive home builders and stated that villages were springing up and the towns were growing into small cities as a result of the influx of new settlers.[51]

Grace E. Flaherty, writing of the Kinkaiders who settled in the southeastern part of Sioux County, said that the privilege of taking a 640-acre homestead was like a divine gift to men with families who had been struggling along as renters in other States where there was no more land available for homesteading. She stated that friendships were easily formed among Kinkaiders and that soon the settlers, both men and women, were exchanging work during the busy season. The soddy was described as the most common and the most ideal pattern for homes because it was easily and cheaply constructed. The soddy was cool in summer and warm in winter which was an important feature in the extreme climate of western Nebraska. She described the Kinkaiders, who first established settlement, as being afraid that they would be attacked and driven out by the big ranchers. Before they left the East, the homesteaders had been warned that their stay would be of a short duration, inasmuch as they would be breaking up the open ranges that the big cattle interests had formerly enjoyed. The fear was soon dispelled as the settlers found the cattle and sheep men were kindly and friendly and often aided them in making their settlements.[52]

In 1909 the Commissioner of the General Land Office, Fred Dennett, made a personal investigation of the Kinkaid area to view first hand the working of the law. On June 28, 1909, those who had made their entries when the land was first opened to Kinkaid settlement became eligible to make final proof. After visiting the land offices in the region, the commissioner reported that all requests for final proof were carefully scrutinized and that in a majority of cases there was every evidence of good faith on the part of the entryman. However, he stated that in about 25 percent of the filings the proof was found to be deficient, and it was thought that fraud might exist. In those cases final proof was refused. Dennett described

[48] *Ibid.*, July 1, 1904, p. 1.
[49] *North Platte Weekly Telegraph*, Jan. 19, 1905, p. 1.
[50] *North Platte Telegraph*, May 24, 1906, p. 1.
[51] *Western Nebraska Observer*, May 12, 1910, p. 2.
[52] Grace E. Flaherty, "Curley Settlement in Southeastern Sioux County," in Wood, *Pioneer Tales*, 157–158.

the use that was being made of the land by the homesteaders, stating that on the average claim most of the land was being successfully used for pasturing, and that the most valuable lowlands were being used to grow enough grain to feed the stock during the winter and to provide flour for the use of the homesteaders' families. Although originally skeptical of the act, after viewing its operation and seeing the comfortable homes that had been constructed, which would have been impossible under the old 160-acre homestead law, he had come to favor the law. In the part of the Kinkaid area that he visited, the law was greatly benefiting the small ranchers as they were obtaining a share in the public domain. He emphasized that if this experimental legislation were to succeed, it was necessary that all proofs be carefully investigated to prevent large land interests from taking illegal advantage, which would make the law fail to fulfill its purpose of providing homes for settlers.[53]

In December 1915, Congress was considering the passage of an enlarged stock-raising homestead law, and the House Committee on the Public Lands requested the Department of the Interior to give an opinion on the advisability of the measure. The same bill had passed the House in the preceding session of Congress but had failed to pass the Senate. The Department was interested in securing the passage of the bill and anticipated that it would be reintroduced in December 1915. Therefore, the Department had sent agents into thirty-one western Nebraska counties to investigate and determine the effect on that region of the 640-acre homestead law.[54]

In reply to the request from the Committee on the Public Lands, Andrieus A. Jones, the First Assistant Secretary, reported by letter to Scott Ferris, chairman of the committee, strongly favoring the bill.[55] Jones called special attention to the operation of the Kinkaid Act during the eleven years since its passage and incorporated in his letter the findings of the Interior Department. Jones stated that considerable land in the region had been entered under other laws but that the development of the region since 1904 was so marked that it must, for the most part, be attributed to the working of the 640-acre homestead law. Some of the valleys and lowlands had produced varied crops of high value and production of livestock had increased rather than decreased, even though the great herds of the cattle barons had been broken up. Attention was called to the improvements that had been made on the claims. Jones said that dwellings of stone, cement, or frame construction, plastered and provided with conveniences, had generally supplanted the original sod houses. He described barns and silos that had been built for protecting livestock and storing crops and stated that the livestock raised on the small ranches was of a higher grade than that which had been produced by grazing on the public lands. Statistics were presented to show the rapid increase in population during the decade in 31 of the 37 counties where the law was applicable. The population of these counties in 1890 was 124,508; in 1900, 107,434; and in 1910, 162,217. The increase was nearly 50 percent in the first decade of the twentieth century, and during six of these years the 640-acre homestead law was in force.

To disprove any contention that the entries, which had been fraudulently made for the benefit of large cattlemen, had been accepted for final proof, Jones stated that of the land entered under the one-section law, there was, on the average, one settler for every 571 acres. He said that the Department had made a thorough study of landownership on the basis of the number of acres proved up on between June 28, 1904 and June 28, 1914, with the following findings. During the period a total of 6,726,516 acres had been patented out of an approximate total of 11,000,000 acres that were opened to one-section settlement. Of the total acreage patented 6,411,963 acres were in the hands of what were termed small holders, and only 316,453 acres were in the hands of large holders, or those possessing over 2,000 acres. To prove that the lands were generally remaining in the hands of the original entrymen, the report stated that 4,589,870 acres were still owned by the parties who had filed on the same.

Jones stated that the Department in its investigations was impressed by the practically unanimous sentiment among the western Nebraska people that the law had been beneficial to them and to the entire region, as it had increased the popu-

[53] U. S. General Land Office, *Report of the Commissioner*, 1909 (61 Congress, 2 session, *House Document 107*, serial 5746, Washington, 1910), 68.

[54] *Congressional Record*, 64 Congress, 1 session, Jan. 17, 1916, 53(2): 1170–1171.

[55] *Stock-Raising Homesteads* (64 Congress, 1 session, *House Report 35*, serial 6903, Washington, 1916), 4–6.

lation, promoted the development of the lands, and advanced generally the public welfare.

The Commissioner of the General Land Office said in his annual report for 1916 that the soil and moisture of the region were such that the land could not be successfully farmed by ordinary methods of cultivation. He reviewed the objection voiced at the time the Kinkaid bill was under consideration that its provisions would be used by wealthy stock growers to obtain large amounts of public land but stated that Kinkaid and others had correctly maintained that if small owners could gain title to enough land to graze a few cattle and thereby support themselves and families they would not readily part with the land. He declared that the final deduction of the Department, after a complete study of the subject, was that the enlargement of the homestead unit by means of the Kinkaid law was a timely recognition that the area of a homestead entry should be measured by the earning capacity of the land that was to be entered.[56]

The Commissioner's report of 1917 also mentioned the Kinkaid Act and stated that, under the provisions of the law, western Nebraska had not only produced numerous new products but also had produced a greater supply of beef cattle than formerly. It also pointed out that the law had provided self-supporting homes for many families and that the lands had ultimately become taxable.[57]

In 1912 the Nebraska State Labor Commissioner, Lewis V. Guie, published a report on settlement in the Kinkaid region.[58] He had made first-hand observations of existing conditions and reported primarily for the benefit of those who might be interested in taking a homestead on a section of the approximately 1,000,000 acres still available. The Commissioner stated that the soil was quite sandy but well adapted to stock raising, dairying, and poultry raising and that the valleys offered fairly good farming lands for root crops. He said that the land still open was as good as that already filed on but that it was located from 5 to 25 miles from a rail shipping point. The homesteader could range from 50 to 100 head of stock on his one-section claim or, if he wished, he could lease part of his pasture to larger ranchers for about 25 cents a year per acre. If, after securing his patent, the homesteader wished to sell his land, he could do so at a price ranging from $2,000 to $4,000, depending on the land and the distance from the railroad.

In the opinion of Guie the Kinkaiders were exceptionally prosperous homesteaders and secured their success with a minimum of effort. He described the chief drawback of Kinkaid settlement as being the monotony and desolation common to frontier life and emphasized that the isolation of a Kinkaider was greater since the size of the homestead unit meant that the closest neighbor would live at least a mile away.

Kinkaid represented Nebraska's Sixth District in Congress from 1903 until his death in 1922. He was interested in efforts to extend the provisions of his 640-acre homestead law to other regions and made several speeches in Congress advocating enlarged homesteads for all parts of the arid West. In these speeches he reviewed his efforts to secure the passage of the one-section homestead law and described the satisfactory effects that it had had in the counties of Nebraska where it applied.

Many of the uninformed blithely declare that the law merely provided a cheap and easy method for the large cattle interests to fraudulently acquire titles to vast tracts of the public domain. The investigation summarized in this article indicates that this interpretation is invalid. It must be admitted that many of the large cattle interests saw in the law an illegal means of gaining land and did attempt to enlarge their holdings by fraudulent entries. However, the agents of the General Land Office were so conscientious and thorough in their investigations of final proofs that most of the attempts to defraud the United States Government were discovered and the patents were withheld.

The Kinkaid Act was a piece of experimental land legislation which applied to a limited area. It was viewed with skepticism when first enacted, but upon investigation of its operation a decade later the effects of the law met with the whole hearted approbation of the Commissioner of the General Land Office and led Congress to extend substantially the same provisions to the other public-land States of the West in the Stock-Raising Homestead Act of 1916.

[56] U. S. General Land Office, *Report of the Commissioner*, 1916 (64 Congress, 2 session, *House Document 1899*, serial 7159), 157–158.

[57] *Ibid.*, 1917, 177.

[58] *Alliance Times*, July 12, 1912, p. 1.

AGRICULTURAL EXPANSION INTO THE SEMIARID LANDS OF THE WEST NORTH CENTRAL STATES DURING THE FIRST WORLD WAR

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General Characteristics. Many of the difficulties of the American farmer during the 1920s and 1930s are directly traceable to World War I.[1] During the conflict, agriculture flourished. The great demand for farm products boosted prices, new lands were opened, production increased, and the farmer prospered.

Then came the return to normal conditions. Foreign markets were drastically reduced. The farmer discovered that he was producing more than he could sell. Surpluses piled up. Prices bogged down. Land which should never have been brought under cultivation began to blow away. American agriculture sank into a depression from which it did not emerge until World War II.[2]

That, in brief, is the explanation we hear about the effect of the first World War upon American agriculture. Insofar as it is based on statistical data, this explanation has its source in a 1923 report by the Bureau of Agricultural Economics.[3] This is the only statistical study concerning expansion into semiarid regions that has been published.

The bureau report states that most of the expansion was made in the Great Plains States of Nebraska, Kansas, Colorado, Oklahoma, and Texas.[4] Here, wheat acreage was greatly enlarged, corn reduced, and "better than 11,000,000 acres of meadow and wild pasture land were plowed up and planted to crops. Much of the new land sown to wheat was located in the semiarid part of the region...." A smaller area, the report continues, was added in the spring wheat area. Here, also, the expansion was brought about "by plowing up some pastures and meadows ... but more especially wild pasture lands in the semiarid sections of the western part of the Dakotas and in Montana."

This report is represented as being an account of wartime expansion. The phrase "during the war" is repeatedly used. Actually, it is an account of expansion during the decade 1909-1919, and is based on statistics for those two years only. This is an entirely different matter, because much of the expansion took place during the years from 1909 through 1914.

Actually, no accurate conclusions as to the extent of expansion into semiarid lands during the war can be drawn from the published data of either the Bureau of the Census or the Department of Agriculture. Such conclusions must be based on year-by-year statistics, by counties. To get such information, it is necessary to go to the publications of State departments of agriculture.

Before doing this, an examination of selected census data will provide a picture of the general characteristics of agricultural expansion during the decade 1909–1919. Such data are presented in Table 1. It will be noticed that by far the largest increases in acreage were made in the West North Central and West South Central States. In this study attention is confined to the former group, and more specifically to the States in that group which have semiarid land—North Dakota, South Dakota, Nebraska, and Kansas.

The purpose of this study is to determine the wartime increase in acreage in the semiarid parts of these States. Using the commonly accepted definition of the term,[5] land west of the 100th meridian of longitude is considered semiarid. The method used varies somewhat for each State,

[1] This article is a summary of the author's thesis with the same title, completed for the master's degree at the University of Wisconsin during the summer of 1946.

[2] See Henry A. Wallace, *The American Choice* (New York, 1940), 70–71, for a representative statement of this generally held view.

[3] "The Wheat Situation," in U. S. Department of Agriculture, *Yearbook, 1923*, 95–150.

[4] *Ibid.*, 133–135.

[5] Andrew Boss, Harold K. Wilson, and William E. Peterson, *American Farming* (St. Paul, Minn., 1939), 1: 20.

depending on the type of statistics available. In general, the procedure is to determine the wartime (1915–1919) increase in each State, by counties. The State is then divided into two parts along the 100th meridian, and the increases in each of the two parts totaled and compared. In cases where county organizations or reorganizations took place during the period, the necessary adjustments are made, and a sound basis of comparison thereby maintained.

A word of explanation is in order concerning the nature of the statistics used. They are, except in the case of South Dakota, tax assessors' figures, based on a survey of all acreage. They are, as the Nebraska State Board of Agriculture states, the "best figures available." It must be remembered, however, that such statistics are, at the best, approximations and must be treated as such.[6]

North Dakota. Adequate data are available to permit a close examination of what actually happened in North Dakota during the war. All statistics used are from the biennial reports of the Commissioner of Agriculture and Labor. The ideal statistics for this purpose would be for improved acreage not including pasture but including summer fallow. Such figures are not available singly or in any combination. The statistics used here are for cultivated acreage.

In this State, county acreages show a greater variation from year to year than in any of the other States studied. Merely comparing the biggest prewar year with the biggest war year is therefore hardly satisfactory, because no one year in either case finds each county at its maximum acreage. The method used is to compare the largest cultivated acreage in each county for any prewar year (1909–1914 inclusive) with the largest acreage in that county in any war year (1915–1919 inclusive).

The statistics are compiled in Table 2. A study of the results leads to two conclusions. First, there was no sudden or abnormally large expansion in cultivated acreage during the war. The increase for the six prewar years was 2,764,149 acres, an average of 460,690 per year. For the five wartime years, the increase was 2,653,863 acres, an average of 530,773 per year. The wartime expansion must therefore be regarded as a continuation of the growth taking place before the war, although at a somewhat accelerated rate.

Secondly, of the wartime increase, 1,721,022 acres, 64 percent of the total, were in the western part of the State. In the eastern part of the State, 932,841 acres were added. There was therefore a disproportionate increase in the semiarid part of the State. But there was a very considerable increase in the eastern part also.

South Dakota. There are no State statistics of agriculture available for South Dakota for the period of this study. There was a board of agriculture in existence, but no acreage statistics were published before 1928.

Census figures alone are not adequate. They reveal the change in acreage, by counties, between 1909 and 1919, but give no data for the intervening years. The United States Department of Agriculture figures, on the other hand, include yearly acreage statistics, but these are for the State as a whole and not by counties. It is therefore necessary to combine these two groups of statistics.

The census figures for "acreage of all crops with acreage reports" would be best for this purpose, but this information is not given by counties. However, a comparison of the acreages in "improved land" accomplishes substantially the same result. The increase in each category was almost the same.[7] For the State as a whole, therefore, the increase in improved land may be regarded as equal to the increase in crop acreage. This same relationship may reasonably be expected to hold true for each half of the State.

The statistics are presented in Table 3. The increase for the entire State between 1910 and 1920 was 2,366,717 acres. Of this total, 1,522,405 acres were in the western part of the State, and 844,312 in the eastern part.

To determine how much of this increase took place during the war, we turn to the United States

[6] There is a slight error in the calculations for Nebraska, due to an error in the statistics presented in the State documents. There is a small discrepancy in the Kansas figures. The errors are not significant, however; in no case do they amount to as much as 0.5 percent.

[7] Otherwise, the figures for improved land could not be used. They include pasture, and an increase in pasture is not an increase in broken land. The difference in increase between the two categories was only 2 percent. Although gathered at the same time, the crop acreage statistics are for 1909 and 1919, and the improved land statistics for 1910 and 1920. U. S. Bureau of the Census, 14th Census, 1920, vol. 5, *Agriculture: General Report and Analytical Tables*, 36–37, 710.

Department of Agriculture statistics. No figures for total cultivated acreages are available. The acreages for principal crops are therefore totaled. The largest wartime acreage was in 1918. The increase between 1909 and 1918 was 2,317,000 acres. Of this increase, 894,000 acres were added before the war, and 1,423,000 during the war. Sixty-one percent of the 1909–1919 increase, therefore, took place during the war.

Our purpose is to discover how much of the wartime expansion was in the semiarid part of the State. If we assume (as is true of the State as a whole) that 61 percent of the increase in this region took place during the war, we reach the conclusion that there was an expansion of about 929,000 acres in the semiarid part of the State during the war. The increase in the eastern part was about 515,000 acres. These figures are admittedly approximate, but the conclusion seems reasonable in view of the evidence available.

Nebraska. The acreage statistics of Nebraska for the years 1909–1913 appear in the 1913 annual report of the State Board of Agriculture, and annually thereafter. The statistics used here are for acreage under cultivation. For one year only, 1914, improved acreage is given instead of cultivated acreage. These figures cannot be used, but by totaling the acreages for principal crops it is found that there was very little change between 1913 and 1914. The year 1913 is therefore used as a prewar base and is compared with the biggest war year, 1919. The statistics appear in Table 4.

The results indicate that the rate of expansion was greatly accelerated during the war. The increase for the prewar period was 1,036,518 acres, and for the war years, 2,867,453 acres. The wartime increase was therefore at a rate almost three times as great as that of the prewar rate.

Most of the wartime increase was, however, in in the eastern part of the State. Here 1,764,444 acres were added, compared to 1,103,009 acres in the semiarid region.

Kansas. Statistics for Kansas are complete, including all crops, tame grasses, and pasturage. The statistics are found in the biennial reports of the State Board of Agriculture.

However, there were changes during the period in the method of tabulating the statistics. Prior to 1915 the term "field crops" included "fenced prairie." Fenced prairie was also tabulated separately. It is therefore necessary to subtract the latter from the former to find the acreage devoted to field crops only. Starting in 1915 fenced prairie was not included under the classification of field crops. The change is only in the method of tabulation; the statistics are comparable after the necessary calculations are performed.

Two different methods were used in an effort to determine the extent and location of acreage changes in this State. The first was a comparison, by counties, of acreage in pasture for the years 1914 and 1918 (figures are not given for 1919). It was hoped in this direct way to discover the acreage of pasture plowed up during the war. But upon totaling and comparing the statistics, the 1918 acreage was found to be greater than that of 1914. This finding, while sound, obviously has no validity for our purpose; it goes without saying that substantial amounts of pasture were plowed up. The reason for this apparent contradiction is to be found in the increase in total land in farms during the period. Strangely, the excellent statistical sections in the Kansas reports give no light on this, but the census figures show an increase of 2,040,380 acres in all land in farms in Kansas during the years 1910–1920.[8] Part of this increase must be assumed to have gone into pasturage.

The second method was to determine the increase in area devoted to field crops (not including pasture) during the period. The largest prewar year (1914) is compared to the largest war year (1919). The figures are tabulated in Table 5.

The statistics reveal that expansion in Kansas was largely a wartime phenomenon. Its acreage devoted to field crops remained remarkably stable during the years 1909–1913. There was an increase of about 1 million acres in 1914. But the big expansion occurred during the years 1915–1919.

Of the total wartime increase of 3 million acres, however, only 1 million were in the counties west of the 100th meridian.

Conclusions. The increase in acreage during the war took place at a substantially accelerated rate, but the expansion cannot be regarded as entirely a wartime phenomenon.

Acreage Increases, 1909–1919

State	1909–1914	1915–1919
North Dakota	2,764,000	2,653,000
South Dakota	894,000	1,423,000
Nebraska	1,036,000	2,867,000
Kansas	689,000	3,077,000
Totals	5,383,000	10,020,000

[8] *Ibid.*, 36–37.

The commonly held assumption that the wartime increase in agricultural acreage in the West North Central States took place largely in the semiarid region is not correct. The increase was by no means confined to this area. On the contrary, there was a greater increase in the eastern parts.

Acreage Increases, 1915–1919

State	*East*	*West*
North Dakota	933,000	1,721,000
South Dakota	515,000	929,000
Nebraska	1,760,000	1,100,000
Kansas	1,994,000	1,080,000
Totals	5,202,000	4,830,000

The figure of 4,830,000 acres represents the maximum amount of semiarid land that could have been brought under cultivation in the West North Central States during the war. The actual amount may well have been considerably less than this. A considerable part of the increase very probably represents increased utilization of land, rather than newly broken land. Rather than let part of their land lie fallow, as they normally would have done, farmers no doubt put as much of it as possible into crops. There are no statistics, State or Federal, which will reveal with any degree of accuracy the extent of such increased utilization of land. It is perfectly clear, however, that the expansion into semiarid land during the first World War, while of considerable size, was neither so extensive nor so sudden a movement as has commonly been supposed.

TABLE 1.—*Acreage of Crops with Acreage Reports*

Region	*1909*	*1919*	*Increase*
United States	311,194,516	348,551,669	37,357,153
New England	4,653,922	4,262,104	−391,818
Middle Atlantic	17,309,074	17,007,595	−301,479
East North Central	59,772,909	62,757,917	2,985,008
West North Central	114,671,661	127,122,665	12,451,004
South Atlantic	30,267,979	31,859,714	1,591,735
East South Central	25,767,143	26,713,789	946,646
West South Central	39,267,232	50,548,349	11,281,117
Mountain	8,857,098	15,717,906	6,860,808
Pacific	10,627,498	12,561,630	1,934,132
West North Central	114,671,661	127,122,665	12,451,004
Minnesota	14,727,447	16,362,970	1,635,523
Iowa	20,371,134	20,420,374	49,240
Missouri	14,332,746	15,418,590	1,085,850
North Dakota	15,888,280	19,422,463	3,534,183
South Dakota	12,226,354	14,654,636	2,428,282
Nebraska	17,229,114	18,935,849	1,706,735
Kansas	19,896,586	21,907,777	2,011,191

Source: U. S. Bureau of the Census, 14th Census, 1920, vol. 5, *Agriculture: General Report and Analytical Tables*, 710. In these tables the minus sign (−) denotes a decrease.

TABLE 2.—*North Dakota*
Total Cultivated Acreage

Year	*Acreage*	*Year*	*Acreage*
1909	12,348,447	1914	15,112,596
1910	13,042,173	1915	16,229,792
1911	14,502,642	1916	14,756,574
1912	14,693,039	1917	15,563,071
1913	15,409,191	1918	18,142,020
		1919	16,922,552

TABLE 2—*Continued*

Cultivated Acreage by Counties

County	*Maximum Acreage 1909–1914*	*Maximum Acreage 1915–1919*	*Increase in East*	*Increase in West*
Adams	107,878	131,613		23,735
Barnes	597,380	560,100	−37,280	
Benson	393,266	467,457	74,191	
Bottineau	661,010	664,554		3,544
Bowman	124,261	112,259		−12,002
Burke	234,205	330,543		96,338
Burleigh	179,431	272,944		93,513
Cass	723,415	757,918	34,503	
Cavalier	512,163	563,522	51,359	
Dickey	353,493	418,000	64,507	
Divide	220,732	402,871		182,139
Dunn	129,538	254,185		124,647
Eddy	194,892	217,013	22,121	
Emmons	265,892	350,107		84,215
Foster	268,679	264,210	−4,469	
Grand Forks	584,160	652,958	68,798	
Griggs	306,337	311,103	4,766	
Hettinger	199,173	262,237		63,064
Kidder	142,718	303,922	161,204	
LaMoure	465,326	481,568	16,242	
Logan	162,498	280,576	118,078	
McHenry	587,195	537,110		−50,085
McIntosh	155,331	211,948	56,617	
McKenzie	151,094	251,062		99,968
McLean	318,661	421,801		103,140
Mercer	130,928	164,200		33,272
Mountrail	184,283	272,485		88,202
Nelson	385,248	401,688	16,440	
Oliver	80,347	133,855		53,508
Pembina	450,442	516,973	66,531	
Pierce	331,535	374,519	42,984	
Ramsey	442,757	494,058	51,301	
Ransom	356,080	307,221	−48,859	
Renville	202,671	369,247		166,576
Richland	483,927	560,327	76,400	
Rolette	243,230	275,525	32,295	
Sargent	332,704	345,924	13,220	
Sheridan	245,386	246,048		662
Stark	241,536	215,483		−26,053
Steele	325,812	307,354	−18,458	
Stutsman	571,818	612,028	40,210	
Towner	442,799	470,366	27,567	
Traill	466,069	473,245	7,176	
Walsh	533,171	553,417	20,246	
Ward	322,400	484,769		162,369
Wells	592,517	567,668	−24,849	
Williams	278,735	411,273		132,538
Morton, Sioux, and Grant	344,517	546,238		201,721
Billings, Slope, and Golden Valley	343,028	439,039		96,011
Totals	16,370,668	19,024,531	932,841	1,721,022

Source: North Dakota Department of Agriculture and Labor, *Biennial Reports of the Commissioner.*

TABLE 3.—*South Dakota*

Acreage of Principal Crops

Year	*Corn*	*Wheat*	*Oats*	*Barley*	*Rye*	*Hay*	*Flax*	*Total*
1908	1,942,000	2,958,000	1,365,000	928,000	32,000	510,000	550,000	8,253,000
1909	2,038,000	3,217,000	1,559,000	1,021,000	33,000	536,000	600,000	9,004,000
1910	2,100,000	3,650,000	1,550,000	1,025,000	35,000	516,000	660,000	9,630,000
1911	2,310,000	3,700,000	1,540,000	1,020,000	13,000	459,000	607,000	9,649,000
1912	2,495,000	3,675,000	1,550,000	887,000	16,000	460,000	619,000	9,602,000
1913	2,640,000	3,775,000	1,590,000	958,000	50,000	460,000	425,000	9,898,000
1914	3,000,000	3,469,000	1,606,000	850,000	60,000	500,000	320,000	9,805,000
1915	3,250,000	3,725,000	1,725,000	1,400,000	90,000	610,000	150,000	10,950,000
1916	2,950,000	3,650,000	1,850,000	825,000	250,000	730,000	150,000	10,405,000
1917	3,350,000	3,200,000	2,138,000	1,020,000	350,000	735,000	140,000	10,933,000
1918	3,100,000	3,280,000	2,050,000	1,400,000	575,000	772,000	144,000	11,321,000
1919	3,200,000	3,725,000	1,850,000	875,000	505,000	890,000	145,000	11,190,000

Source: The "revised" statistics in the U. S. Department of Agriculture *Yearbooks*.

Acreages of Improved Land by Counties

County	*1910*	*1920*	*Increase in East*	*Increase in West*
Armstrong	1,059	2,076		1,017
Aurora	209,957	314,188	104,231	
Beadle	545,361	529,398	15,963	
Bennett	2,093	51,265		49,172
Bon Homme	265,857	271,598	5,741	
Brookings	426,605	415,125	−11,480	
Brown	854,872	882,686	27,814	
Brule	216,241	329,475	113,234	
Buffalo	18,183	67,369	49,186	
Butte	48,775	88,367		39,592
Campbell	301,748	266,966	−34,782	
Charles Mix	448,890	460,421	11,531	
Clark	483,737	453,557	−30,180	
Clay	219,245	219,839	594	
Codington	360,248	359,875	−373	
Corson	127,878	317,980		190,102
Custer	56,938	53,416		−3,522
Davison	211,597	212,470	873	
Day	510,564	506,462	−4,102	
Deuel	266,050	284,402	18,352	
Dewey	11,643	108,151		96,508
Douglas	206,888	182,129	−24,759	
Edmonds	287,893	397,904	110,011	
Fall River	58,117	130,594		72,477
Faulk	361,137	384,662	23,525	
Grant	295,048	302,064	7,016	
Gregory	325,701	346,827	21,126	
Hamlin	269,152	270,836	1,684	
Hand	556,337	473,673	−82,664	
Hanson	213,317	206,080	−7,237	
Harding	47,244	103,467		56,223
Hughes	62,531	144,237	81,706	
Hutchinson	388,511	402,399	13,888	
Hyde	78,535	183,945	105,410	
Jerauld	172,640	250,771	78,131	
Kingsbury	409,031	450,258	41,227	

TABLE 3.—*Continued*

County	*1910*	*1920*	*Increase in East*	*Increase in West*
Lake	310,392	291,323	−19,064	
Lawrence	41,014	48,213		7,199
Lincoln	326,233	329,760	3,527	
McCook	304,244	277,539	−26,705	
McPherson	250,684	382,386	131,702	
Marshall	348,272	415,035	66,763	
Meade	180,821	202,562		21,741
Mellette	2,012	108,462		106,450
Miner	286,440	267,596	−18,844	
Minnehaha	454,907	431,239	−23,668	
Moody	286,277	257,003	−29,274	
Pennington	173,501	167,639		−5,862
Perkins	108,685	202,081		93,396
Potter	181,694	226,765	45,071	
Roberts	473,304	508,795	35,491	
Sanborn	192,875	233,905	41,030	
Shannon	21,809	8,445		−13,364
Spink	746,443	794,095	47,652	
Sully	100,234	182,699		82,465
Todd	2,875	39,259		36,384
Tripp	49,263	388,260		338,997
Turner	327,650	334,230	6,580	
Union	242,209	229,572	−12,637	
Walworth	193,464	222,118		28,654
Washabaugh	1,123	27,677		26,554
Washington	17,132	13,723		−3,409
Yankton	237,429	235,707	−1,722	
Ziebach	638	92,662		92,024
Haakon, Jackson, and Stanley	372,681	369,226		−3,455
Jones and Lyman	273,280	486,342		213,062
Totals	15,827,208	18,199,250	844,312	1,429,009

Source: U. S. Bureau of the Census, 14th Census, 1920, vol. 6, *Agriculture: Report by States*, pt. 1, p. 654–660.

TABLE 4.—*Nebraska*

Total Cultivated Acreage

Year	*Acreage*	*Year*	*Acreage*
1909	12,692,887	1914	(see text)
1910	13,223,488	1915	15,293,335
1911	13,773,148	1916	14,209,364
1912	12,468,663	1917	14,655,687
1913	13,729,405	1918	16,401,817
	1919	16,397,917	

Cultivated Acreages by Counties

County	*1913*	*1919*	*Increase in East*	*Increase in West*
Adams	203,847	278,259	74,412	
Antelope	252,033	273,014	20,981	
Banner	32,367	53,677		21,310
Blaine	23,901	35,596	11,695	
Boone	236,898	276,145	39,247	
Box Butte	46,152	80,932		34,780
Boyd	109,547	140,554	31,007	
Brown	55,384	78,136	22,752	

TABLE 4.—*Continued*

County	1913	1919	Increase in East	Increase in West
Buffalo	322,419	343,741	21,322	
Burt	172,126	199,643	27,517	
Butler	220,652	282,564	61,912	
Cass	212,981	237,951	24,970	
Cedar	263,735	272,596	8,861	
Chase	90,358	147,593		57,235
Cherry	101,458	128,016		26,558
Cheyenne	62,201	251,556		189,355
Clay	241,083	266,784	25,701	
Colfax	147,559	173,146	25,587	
Cuming	220,735	249,439	28,704	
Custer	430,903	480,252	49,349	
Dakota	89,304	97,176	7,872	
Dawes	47,661	82,086		34,425
Dawson	263,857	313,229	49,372	
Deuel	25,930	90,156		64,226
Dixon	154,018	182,230	28,212	
Dodge	192,418	231,627	39,209	
Douglas	101,556	116,501	14,945	
Dundy	82,032	124,107		42,075
Fillmore	264,967	271,660	6,693	
Franklin	162,420	177,330	14,910	
Frontier	206,988	218,953		11,965
Furnas	219,546	262,126	42,580	
Gage	344,490	364,875	20,385	
Garden	29,251	64,405		35,154
Garfield	39,043	43,290	4,247	
Gosper	134,677	136,229	1,552	
Grant	2,195	7,248		5,053
Greeley	79,092	136,925	57,833	
Hall	182,065	198,401	16,336	
Hamilton	243,887	277,793	33,906	
Harlan	184,638	214,819	30,181	
Hayes	82,485	105,462		22,977
Hitchcock	124,152	259,449		135,297
Holt	189,024	217,089	28,065	
Hooker	70,373	15,449		−54,924
Howard	172,781	174,630	1,849	
Jefferson	202,458	221,176	18,718	
Johnson	132,063	144,544	12,481	
Kearney	191,906	209,302	17,396	
Keith	57,828	114,591		56,763
Keya Paha	66,074	71,563	5,489	
Kimball	32,512	90,251		57,739
Knox	271,031	326,869	55,838	
Lancaster	276,071	334,164	58,093	
Lincoln	199,452	245,366		45,884
Logan	29,710	41,282		11,572
Loup	28,181	32,535	4,354	
Madison	201,559	232,286	30,727	
Merrick	112,370	130,485	18,115	
Morrill	39,574	94,004		54,430
Nance	143,105	171,099	27,994	
Nemaha	115,572	163,882	48,310	
Nuckolls	19,073	228,031	208,958	

TABLE 4.—*Continued*

County	*1913*	*1919*	*Increase in East*	*Increase in West*
Otoe	313,559	252,809	−60,750	
Pawnee	125,762	153,504	27,742	
Perkins	57,575	134,933		77,358
Phelps	215,991	217,357	1,366	
Pierce	162,075	220,502	58,427	
Platte	253,571	274,516	20,945	
Polk	272,723	202,245	−70,478	
Redwillow	188,252	193,269		5,017
Richardson	202,214	192,183	−10,031	
Rock	38,119	41,359	3,240	
Saline	235,737	250,024	14,287	
Sarpy	94,633	97,964	3,331	
Saunders	269,377	324,278	54,901	
Scott's Bluff	88,395	144,298		55,903
Seward	187,986	255,069	67,083	
Sheridan	105,019	155,424		50,405
Sherman	130,356	160,124	29,768	
Sioux	36,034	64,151		28,117
Stanton	140,819	157,807	16,988	
Thayer	236,132	240,151	4,019	
Thomas	9,369	14,466		5,097
Thurston	131,787	137,355	5,548	
Valley	155,703	167,748	12,045	
Washington	140,566	273,548	132,982	
Wayne	165,376	222,911	57,535	
Webster	192,484	203,610	11,126	
Wheeler	31,633	38,948	7,315	
York	270,258	268,946	−1,582	
Arthur and McPherson	24,172	53,410		29,238
Totals	13,729,405	16,597,578	1,764,444	1,103,009

Source: Nebraska State Board of Agriculture, *Annual Reports.*

TABLE 5.—*Kansas*

Total Acreage

Year	*Field Crops Including Fenced Prairie*	*Fenced Prairie*	*Field Crops Only*
1909	33,775,266	14,709,974	19,065,292
1910	33,394,799	14,230,156	19,164,643
1911	33,402,415	14,423,730	18,978,485
1912	33,175,757	14,051,336	19,124,421
1913	33,536,988	14,536,240	19,000,748
1914	34,464,767	14,458,471	20,006,296
1915		13,697,016	19,359,633
1916		13,011,781	21,861,985
1917			22,252,920
1918		14,776,415	22,249,594
1919			23,084,050

Acreages of Field Crops by Counties

County	*1914*	*1919*	*Increase in East*	*Increase in West*
Allen	139,163	172,694	33,531	
Anderson	133,194	178,571	45,377	
Atchison	167,050	186,531	19,481	

TABLE 5.—*Continued*

County	1914	1919	Increase in East	Increase in West
Barber	215,830	231,834	16,004	
Barton	342,764	389,850	47,086	
Bourbon	155,812	197,313	41,501	
Brown	269,879	288,134	18,255	
Butler	282,531	295,936	13,405	
Chase	70,385	91,867	21,482	
Chautauqua	88,394	97,454	9,060	
Cherokee	162,214	208,392	46,178	
Cheyenne	168,009	255,538		87,529
Clark	153,060	188,315		35,255
Clay	229,685	250,327	20,642	
Cloud	259,772	268,920	9,148	
Coffey	161,270	215,701	54,431	
Comanche	170,916	186,969	16,053	
Cowley	258,035	283,614	25,579	
Crawford	147,814	198,988	51,174	
Decatur	262,790	282,124		19,334
Dickinson	280,943	319,550	38,607	
Doniphan	157,197	174,655	17,458	
Douglas	137,231	158,117	20,886	
Edwards	231,392	246,043	14,651	
Elk	98,284	129,227	30,943	
Ellis	261,642	280,636	18,994	
Ellsworth	217,168	234,972	17,804	
Finney	76,001	121,713		45,712
Ford	344,050	400,609		56,559
Franklin	179,430	191,326	11,896	
Geary	75,902	86,605	10,703	
Gove	139,595	178,641		39,046
Graham	277,819	288,337		10,518
Grant	14,834	31,797		16,963
Gray	99,220	200,446		101,226
Greeley	10,797	14,714		3,917
Greenwood	149,820	186,231	36,411	
Hamilton	17,239	26,337		9,098
Harper	303,386	309,777	6,386	
Harvey	209,582	231,288	21,706	
Haskell	23,323	63,037		39,714
Hodgeman	166,540	179,656		13,116
Jackson	213,582	261,365	47,783	
Jefferson	223,069	220,400	−2,669	
Jewell	341,153	345,706	4,553	
Johnson	179,025	200,725	21,700	
Kearny	31,597	42,631		11,034
Kingman	276,316	304,470	28,154	
Kiowa	230,364	244,177	13,813	
Labette	212,871	232,101	19,230	
Lane	110,948	135,958		25,010
Leavenworth	159,634	181,998	22,364	
Lincoln	199,754	224,470	24,716	
Linn	147,281	200,560	53,279	
Logan	73,527	88,165		14,638
Lyon	189,553	227,226	37,673	
Marion	294,523	327,879	33,356	
Marshall	328,518	369,301	40,783	

TABLE 5.—*Concluded*

County	*1914*	*1919*	*Increase in East*	*Increase in West*
McPherson	335,871	369,654	33,783	
Meade	161,020	225,621		64,601
Miami	183,159	251,645	68,486	
Mitchell	251,335	276,172	24,837	
Montgomery	122,517	172,499	49,982	
Morris	136,741	170,479	33,738	
Morton	21,102	37,999		16,897
Nemaha	275,584	292,053	16,469	
Neosho	149,204	190,695	41,491	
Ness	234,669	229,575		−5,094
Norton	260,501	290,224		29,723
Osage	173,203	214,614	41,411	
Osborne	259,229	286,989	27,760	
Ottawa	213,344	224,876	11,532	
Pawnee	314,678	336,777	22,099	
Phillips	293,812	303,817	10,005	
Pottawatomie	165,190	207,086	41,896	
Pratt	305,880	312,493	6,613	
Rawlins	209,634	260,786		51,152
Reno	469,714	509,449	39,735	
Republic	267,982	289,253	21,271	
Rice	287,261	302,689	15,428	
Riley	135,638	154,431	18,793	
Rooks	287,672	313,028	25,356	
Rush	253,402	277,217	23,815	
Russell	254,238	258,448	4,210	
Saline	227,166	240,169	13,003	
Scott	54,255	88,506		34,251
Sedgwick	392,553	417,157	24,604	
Seward	76,798	131,861		55,063
Shawnee	137,646	187,988	50,342	
Sheridan	212,130	248,927		36,797
Sherman	87,320	127,979		40,659
Smith	320,751	350,298	29,547	
Stafford	313,094	334,730	21,636	
Stanton	13,330	22,173		8,843
Stevens	49,461	118,897		69,436
Sumner	484,737	503,000	18,263	
Thomas	204,432	289,300		84,868
Trego	184,072	232,099		48,027
Wabaunsee	132,840	167,099	34,259	
Wallace	24,463	34,802		10,339
Washington	289,224	329,399	40,175	
Wichita	27,894	34,293		6,399
Wilson	124,492	164,703	40,211	
Woodson	75,393	139,073	63,680	
Wyandotte	32,387	33,177	790	
Totals	20,006,296	23,084,050	1,994,478	1,080,630

Source: Kansas State Board of Agriculture, *Biennial Reports*.

THE TREE FARM MOVEMENT: ITS ORIGIN AND DEVELOPMENT

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The American lumbering industry has witnessed three striking, even revolutionary, changes since 1900.[1] In forest products laboratories the chemist's magic has opened vast new fields in wood utilization, thus creating new products and expanding areas of investment undreamed of during the nineteenth century. Changes in labor-management relations and the mechanization of lumbering equipment have altered the appearance of the modern lumbering camp. Finally, a changing attitude toward the resource itself has spread throughout the industry, transforming the forest from a "timber mine" into a "tree farm."

Lumbermen have welcomed innovations in wood utilization and advances in mechanization as new sources of profit but have accepted the other changes with manifest reluctance, marking as they do a clear break with the extractive, impermanent, and migratory industry of the nineteenth century. From earliest days the industry has been concerned with the harvesting, transporting, manufacturing, and marketing of forest products. The rapid decline of America's saw-timber in mature virgin stands has forced upon the industry the additional responsibility of growing its raw material. The tree farm movement is the latest effort by progressive timberland owners to meet this imperative need.

Tree farming is actually a popularized term for forest management as applied on privately owned lands. Its sponsors very early defined it as "privately owned forest-land dedicated to the growing of forest crops for commercial purposes, protected and managed for continuous production of forest products."[2]

Though forestry practices have been applied on public and private lands for many years, the tree farm movement had its origins in the Pacific Northwest as recently as 1940 when the Weyerhaeuser Timber Company shrewdly designated one of its reforestation projects as a "tree farm." Company foresters estimated that if the project were to be a profitable investment, fire losses must be held to less than one-quarter of 1 percent a year on the 120,000-acre tract.[3] The movement was conceived primarily as an effort to prevent fire losses by applying accepted fire protection techniques and by stirring public imagination through the adoption of an expression which conservationists had used for many years. Since a careless public has been chiefly responsible for fire losses in American timberlands, this was an inspired move and quickly accomplished its immediate purpose. The project was further dramatized by formal dedication ceremonies in which the forest was named in honor of a pioneer Washington logger, Charles H. Clemons. The Clemons Tree Farm thus set the pattern for the movement which was soon to sweep through the industry.

The immediate and widespread publicity lavished upon the new enterprise awakened the industry to the possibilities of tree farming. Less than six months after the dedication of the Clemons Tree Farm in June 1941, the National Lumber Manufacturers Association launched a nation-wide campaign among timberland owners under the title, "American Tree Farms System."[4] The response was spectacular as forest owners rushed to place their lands under certification and to placard their holdings as tree farms. From the initial tree farm of 120,000 acres in 1941 tree farm acreage grew to 5 million during 1942, to nearly 7½ million by 1943, and to over 17 million by January 1949. During its infancy, the tree farm movement made its chief appeal to large timberland owners. After three years of operation, for

[1] This article was presented at the joint session of the Agricultural History Society, the Economic History Association, and the Missippi Valley Historical Association at Rock Island, Illinois, on April 23, 1948. It is a summary of a research project sponsored by the Forest Products History Foundation at the Minnesota Historical Society.

[2] American Forest Products Industries, *Tree Farms: Planning a Program* (Washington, 1947), 2.

[3] Memorandum by J. C. McClellan of the American Forest Products Industries to the author, July 25, 1947.

[4] Walker B. Tilley, "American Tree Farms," in *Journal of Forestry*, 42: 796–799 (November 1944).

example, western tree farms averaged 40,000 acres in size and those in the South 10,000 acres.[5]

This mushroomlike growth was not altogether wholesome nor did it always indicate the acceptance of sound forestry practices. The rapid growth was sometimes the result of hasty and unwise certification of lumbering enterprises which valued the favorable publicity. A growing criticism of the movement on this score led to a stiffening of the requirements and to a more adequate inspection of forest properties by foresters of the sponsoring agencies. Lyle F. Watts, chief of the United States Forest Service, cautioned the movement that if it would have real significance "high standards of forest practice must be maintained." Then he added: "Unfortunately, mediocre or lower performance has served to qualify some properties for the 'Tree Farm' designation."[6] No doubt, there was substance to this charge. The *Mississippi Valley Lumberman*, though thoroughly sympathetic with the movement, later complained that tree farm certificates were sometimes "handed out high, wide and handsome" during the initial months.[7]

More fundamental explanations for the movement's rapid expansion exist. Many companies, especially the large lumber and pulp manufacturers, were already practicing forestry on their holdings. The United States Forest Service reported in 1938 that 14.2 percent of the 202,100,000 acres held by industrial and other nonfarm owners was under forest management.[8] Somewhat later National Lumber Manufacturers Association statistics based on the reports of State foresters in 1942 claimed that 60 percent of the 346 million acres of privately owned forest land was in productive growth, 21 percent was under continuous forest production, and 8 percent was under intensive forest management.[9] Thus many tree farm certificates were in recognition of management practices already established on commercial lands.

Numerous other owners who previously had not practiced forestry were also encouraged to join the tree farm movement. An excellent market for forest products and a changing tax structure in many States induced forest owners to spend funds for silvicultural practices previously regarded as uneconomic. In the background, moreover, was the increasing recognition that timber resources were declining and the growing fear of the ominous demand for public regulation which had gained increasing strength with each passing year. This fear served as a powerful stimulant, for many owners were discovering that a favorable public opinion toward the industry was imperative to its survival.

The tree farm movement is the logical outgrowth of fifty years of agitation and propaganda for conservation. Industrial forestry has developed as early leaders in the conservation movement predicted it would. B. E. Fernow, Gifford Pinchot, Carl A. Schenck, J. T. Rothrock, Austin Cary, and others forecast very early that the decline of America's virgin stands would force lumbermen to adopt conservative forestry techniques. They cited the European experience as evidence. As early as 1903 Pinchot declared: "We understand now that forestry is a business, and that it will be applied only when it is worth while from a business point of view."[10]

In a similar vein, one of the earliest conservation journals in the United States, the *Forester*, expressed the view in 1898 that "Forests will be managed properly and reproduced ***when it pays*** to do so, and love of trees or zeal for the beautiful will have as little to do in this business of woodcropping, as love for the waving wheat field and the beauty of the tasseled corn is the incentive to the farmer to plow and sow."[11] The acceptance of sustained-yield practices by an increasing number of lumber companies in recent years is the fulfillment of these prophecies.

The dwindling supply of virgin saw-timber on private lands has compelled the lumberman to take thought of tomorrow's trees if he is to stay in business. Thus the tree farm movement and all

[5] U. S. Forest Service, *Report of the Chief of the Forest Service*, 1945, p. 13.

[6] *Ibid.*, 1943, p. 13.

[7] *Mississippi Valley Lumberman* (Minneapolis), 77 (13): 5 (Mar. 29, 1946).

[8] *Report of the Joint Committee on Forestry* (77 Congress, 1 session, *Senate Document 32*, serial 10574, Washington, 1941), 25.

[9] Statement of Wilson Compton, secretary of the National Lumber Manufacturers Association, in the *Mississippi Valley Lumberman*, 74 (41): 25 (Oct. 8, 1943).

[10] Address entitled "The Forester and the Lumberman" before the Wholesale Lumber Dealers Association, Washington, D. C., Mar. 3, 1903, in *Forestry and Irrigation*, 9: 176 (April 1903).

[11] *Forester*, 4: 68 (April 1898).

other similar projects make a virtue of economic necessity. The Bureau of Corporations estimated the total stand of saw-timber in 1909 at 2,826 billion board feet. By 1946, this had declined to 1,601 billion board feet.[12] Even more striking is the revelation that this estimate is 9 percent less than that submitted to the Congressional Joint Committee on Forestry in 1938.[13]

This dwindling supply has threatened to leave numerous companies without raw materials to continue operations. To meet this challenge, leaders in the industry have turned to sustained-yield programs or to modified exploitation cutting. By 1946, Forest Service investigations revealed that only 8 percent of privately held timberlands were destructively cut, though 56 percent remained as yet under poor cutting management.[14] The industry had thus emerged from a liquidation or exploitation era into a transition stage which acknowledged the essential truth of the frequent statistical warnings issued by the Forest Service. Its chief warned in 1946, for example, that without the adoption of intensive forestry practices, "Mills representing 60 percent of the present sawmill capacity of Washington and Oregon do not have private timber to operate more than 15 years."[15] The purpose and promise of the tree farm movement is to prevent this decay of the industry.

The disaster which has threatened an entire industry is best illustrated through a case study of a single company. In 1934 the W. T. Smith Company of Chapman, Alabama faced the unhappy prospect of an early liquidation of its timber holdings. After fifty years of lumbering, only six or eight years remained if destructive cutting practices continued. The alternative to liquidation was clearly the adoption of a sustained-yield program which would keep growth and drain balanced through the years. The acceptance of this philosophy accomplished its purpose, and ten years later the company was cutting annually less than its growth. Even more important, it now had plans for permanent operations as a tree farm.[16]

The tree farm movement appealed to progressive forest owners at this very point for it offered stability and permanence rather than the instability and impermanence of liquidation cutting. The resulting changes in the economic and social life of the lumbering communities stand in striking contrast to the ghost towns and rural slums left in the wake of the earlier "cut-and-get-out" operators. Leaders in the industry have wisely initiated perpetual tree-crop programs while virgin holdings yet remained to sustain them until the managed forests ripen for the harvest.

Fear of government regulation was also a motive in the creation of the American tree farms system. Lumbermen announced in unmistakable language their objections to any program emanating from a bureau in Washington. Industrial self-regulation rather than government control has been their plea. Though industry spokesmen admitted an unsatisfactory cutting situation, they vigorously contended that there has consistently been "more good forestry and less destructive cutting."[17]

The inauguration of the tree farm movement represented a major step toward self-regulation. Progressive lumbermen quickly discovered, however, that the greater their number who avoided the need of public regulation by joining the movement, the greater the demand for regulating the remaining owners.

The United States Forest Service has consistently preached a gospel of federal regulation. With increasing impatience it has announced that only two alternatives exit: "One is public ownership and management of more forest land.... The other is Nation-wide public regulation of cutting and other forest practices on privately owned forest land."[18] Officials of the Forest Service received the tree farm movement coolly, charging that its real purpose was to avoid federal regulation. Chief Watts voiced these suspicions by challenging the industry's motives. " 'I cannot escape the conclusion,' " he announced, " 'that the

[12] U. S. Forest Service, *Gaging the Timber Resources of the United States* (Washington, 1946), 49.

[13] *Report of the Joint Committee on Forestry* (77 Congress, 1 session, *Senate Document 32*, serial 10574, Washington, 1941), 39; U. S. Forest Service, *Report of the Chief of the Forest Service*, 1946, p. 3.

[14] U. S. Forest Service, *The Management Status of Forest Lands in the United States* (Washington, 1946), 4.

[15] U. S. Forest Service, *Report of the Chief of the Forest Service*, 1945, p. 12.

[16] Julian F. McGowin, "Pine Growers," in *American Forests*, 50: 222–223 (May 1944).

[17] Wilson Compton in the *Mississippi Valley Lumberman*, 74 (41): 9 (Oct. 8, 1943).

[18] U. S. Forest Service, *Report of the Chief of the Forest Service*, 1941, p. 13.

real object of this campaign is to ward off public regulation. . . .' "[19]

Other professional foresters have not shared this harsh judgment. The official organ of the Society of American Foresters, the *Journal of Forestry*, did not consider this objection a serious one. "That one of its purposes is frankly to forestall federal regulation," wrote its editor, ". . . is certainly not to its discredit."[20] In its 1941 report the committee on private forestry of this professional organization implicitly rebuked the Forest Service with the comment, "Undue cynicism or distrust of the intentions or achievements of private owners is not conducive to cordial and pleasant relations between forest owners and foresters."[21]

To achieve these ambitions the tree farm movement was provided with the machinery of self-regulation. Under the auspices of the American Forest Products Industries, Inc., a subsidiary of the National Lumber Manufacturers Association, tree farm committees were created to sponsor the movement in each State. These committees were organized to represent the lumbermen's regional associations, the State forestry or conservation commissions, and the conservation societies. With the advice of technically trained foresters, they then prepared the standards for certification. The movement wisely sought to allow sufficient flexibility to meet the widely differing silvicultural demands of the diverse forest areas in the United States.

Widespread publicity accompanied the establishment of each new tree farm. Formal dedication ceremonies featuring speeches, barbecues, tree farm queens, and other accepted publicity techniques were devised to attract public attention. Newspapers were liberally supplied with information regarding the movement, movies were filmed to indoctrinate the public with the importance of America's forests, and a nation-wide campaign was launched to sell to a disinterested public the idea that trees are crops which must be protected, grown, and harvested as any other agricultural crop.

Overenthusiasm by partisans of the movement, however, gave many foresters the feeling that the industry sought to create the opinion that the tree farm movement had made the initial discovery that trees grow and can be treated as a crop. Others pointed out that the movement disregarded important aspects of forestry such as prevention of soil erosion, conservation of wildlife and forage, and protection of water supply.

Tree farm publicity as a result came under considerable criticism. Frequent use of the slogans—Sustained Yield, Perpetual Forests, Selective Logging, Trees for Tomorrow, Lumbering Is Agriculture, and Trees Are Crops—in a loose or misleading fashion caused some consternation among professional foresters. Chief Watts of the Forest Service branded as misleading the publicity issued by the sponsoring agencies. In 1943 he condemned it as creating " 'the impression that little not already being done on private land is needed to assure the nation ample timber supplies for the future.' "[22]

These critics overlooked the fact, however, that the tree farm movement was accomplishing a feat of indoctrination unparalleled in conservation history. Ninety percent of America's forest fires are annually caused by a careless public. Previous efforts to arouse the public to this tragic waste had failed badly, though conservation organizations and the Forest Service itself had sponsored elaborate publicity drives. Tree farm committees, working with the "Keep Green" movement, performed a signally successful task of indoctrination in a field marked by previous failures.

The constant criticism leveled at the movement pointed out numerous weaknesses and stimulated many changes. The sponsors, for example, tightened the standards for certification and insisted on continued inspection of forest practices after certification. Tree farm certificates have been withdrawn from members failing to meet the required standards of forest management. The heavy concentration of certificates among large timberland owners prompted the sponsors to pay attention to the four million woodlot owners whose cutting practices have been of increasing concern in recent years.

A major change has been the shifting emphasis from fire protection as adequate forestry to a demand for silvicultural practices promoting sustained yield. Early publicity pictured fires, insects, and diseases as the "bank robbers" which

[19] Speech at Milwaukee, September 1943, quoted in *American Forests*, 49: 548 (November 1943).

[20] *Journal of Forestry*, 40: 596 (August 1942).

[21] American Society of Foresters, Report of the Committee on Private Forestry, in *ibid.*, 39: 116 (February 1941).

[22] Quoted in the *Mississippi Valley Lumberman*, 74 (41): 9 (Oct. 8, 1943).

destroyed America's timber supply. By 1944, however, the emphasis had shifted to growing more trees.[23] This was a significant change for the industry had previously placed the responsibility for forest depletion on fire, insects, windfall, or disease and seldom on the lumberman's axe.

Thus the tree farm movement grew in stature in its initial years. A growing concept of the industry's responsibilities kept pace with the expanding acreage brought under forest management. In its origins and early years the movement was clearly a promising conservation development whose effectiveness must be measured by the standards of protection and forest practice required of its members. The challenge yet remaining to the tree farm movement is clear. The cutting practices on nearly two-thirds of America's forest land are yet poor to destructive, and 136 million acres of forest still lack any organized protection.[24]

[23] U. S. Forest Service, *Report of the Chief of the Forest Service*, 1946, p. 8.

[24] *Ibid.*, 1946, p. 9.

THE TRAFFIC IN SEEDS AND PLANTS FROM ENGLAND'S COLONIES IN NORTH AMERICA

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During the eighteenth century there rose in Europe a brisk and growing interest in strange and unusual plants.[1] Linnaeus had made botany popular; his followers sought to make it profitable as well. Botanical gardens multiplied; private collections became the rage; experiments were conducted, and professional patrons found it fashionable to lend their names and protection to this latest popular fad.

There were many fields for exploration. The trade to China and the Indies was well-fitted with ships long accustomed to odd and unusual cargoes. Such small commissions as the boxes and bales of collected plants were undertaken easily along with the more stereotyped goods. The West Indies, a fertile source of sugar and rum, could be relied upon to furnish also fruits, seeds, and slips of tropical plants. But it was in North America that the collecting interest centered. The climate was not too sharply unlike that of Europe; plants collected from there might thrive out of doors, even after shipping. The country was still largely unexplored; all sorts of curiosities might be discovered there, for as yet no systematic attempt had been made, even in the more settled parts, to discover the types of native plants which existed. A fresh and profitable field was offered; from the Colonies might be sent those seeds, slips, roots, and even blooms which might not only lend a touch of the unusual, of rarity, to gardens but have commercial possibilities as well.

Collectors and backers came from all walks and ranks of life. There were solitary scientists such as Sir Hans Sloane (1660–1753), physician to Queen Anne, who found time to establish a botanical garden, be president of the Royal Society, make a notable collection of plants and books and manuscripts, all the time carrying on his regular duties. There were titled gentlemen—Lord Petre, Lord Dellefore, Lord Hopetown, the Dukes of Argyle, Richmond, Bedford, and Norfolk—a representative roll call of the peerage—who willingly lent their names and, more important still, their purses to this new and diverting interest. Then there were men of wealth, but no claim to fashion, best known of whom was Peter Collinson (1694–1768), shrewd merchant, an odd mixture of pure love of learning and cautious fondness for the turning of trifles to good financial account.

In addition to the various individuals there were groups of scientists and societies in London and Edinburgh, who held learned meetings and performed grave tests and trials on the strange assort-

[1] Mrs. John Minor Stetson resides at 232 Jamestown Road, Williamsburg, Virginia. She received her B.S. and M.S. degrees in landscape architecture at Pennsylvania State College. She was librarian for the division of landscape gardening at the University of Illinois during 1922–1925. She is the author of many articles on landscape architecture, gardening, and gardening literature. Especially noteworthy is her article on "American Garden Books, Transplanted and Native, before 1807," in the *William and Mary Quarterly*, ser. 3, 3: 343–369 (July 1946).—*Editor.*

ments of materials they could gather together. The kings of France and of England could not be accused of either botanical leanings or learning, but they assisted at various critical times by lending royal sanction and small sums of money to further schemes which might be profitable to the royal purse.

Various colonial gentlemen interested themselves greatly in the possibilities of new plants. Such a one was William Byrd (1674–1744), Virginia born, English bred, the owner of what was, by all reports, the best garden in Virginia. This "Black Swan," perfect courtier, polished gentleman—so full of projects that a dozen lifetimes could not see them half begun—had brought the England of Queen Anne to the backwoods of America. He built him a mansion and made a garden on the raw banks of the James; dressed in European silks he ate home-grown food from imported silver and china dishes, happy in this Canaan, but unable to "forget the Onions and Fleshpots of Egypt."[2] Keenly alive to the opportunities and potential riches within his reach, he regarded America with a deep affection, yet with the eye of a cultivated foreigner to whom, after all, Europe alone spelled civilization.

As one of the commission appointed to settle the location of the boundary line between Virginia and North Carolina, Byrd explored the western part of Virginia and was entranced by his discoveries. If the "People of Europe did but know what a Blessed Retreat they . . . [have] in this happy country they would come over to it in as great Flocks as wild Pidgeons fly over it, which sometimes darken the sky," he exclaimed.[3] And immediately he set about perfecting schemes for colonizing and developing this "New Eden." Like most of the planters he was usually hard-pressed for ready money; and any fresh source of income was bound to be welcome. Settling the back country with German immigrants, obtaining new grants for cultivation, finding new exports, all these took in their turn his full attention.

Byrd was enthusiastic about everything, usual or unusual, which came to his notice; every plant, every root, which might have commercial possibilities was carefully examined; anything with medical potentialities he tested on his own person for possible effects. Although he knew but little of botanical classification, he turned that little to good account, for he sent shipment after shipment to England for further analysis and identification after rough appraisal had proved to his satisfaction that some good might be expected.

Nothing that was curious or of unknown properties was neglected.[4] Poke, Byrd thought, might be a new source of dye. Another plant, of which he professed botanical ignorance, but which he had sampled—his childlike faith in the harmlessness of his discoveries is touching—was good for "the dry gripes." Jerusalem oak seed mixed with honey was an infallible specific for worms in the digestion; stickweed root would stop a nosebleed; snakeroot, powdered and dissolved in canary wine, became an excellent tonic to restore the vigor of the stomach. "The Truth of it is," he wrote in 1737, "Our Woods abound with so many very usefull Plants, that woud you do as much good after you are dead, as you do while you are alive. . . . Nature seems to be more in her youth, and to come later and fresher out of her Creators hands."

Ginseng was Byrd's real discovery and especial pride, and he had large schemes for the export of this particular root. When, inadvertently, his name was left out of a list of members of the Royal Society one year, he grieved over this fancied slight and wrote plaintively that his efforts toward ginseng alone should insure the inclusion of his name. Part of this favorable opinion seems to have been based on the coyness of the plant:

> . . . the Frugal hand wherewith Providence dispenses this Noble vegetable is a proof of its excellence. On the mountains where it grows tis hard to be met with & tis as easie to propagate Chastity in that great city as it is Ginseng in a Garden. The Seed is 20 months in the Ground before it comes up and the Root ten years before it grows fit for use. All these Difficultys make it an absolute Rarity and indeed its vertues are so great that mankind is not worthy to have it in plenty.[5]

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[2] William Byrd II to Charles, Earl of Orrery, July 5, 1726, in the *Virginia Magazine of History and Biography*, 32: 27 (January 1924).

[3] William Byrd II to Mr. Ochs, c. 1735, in *ibid.*, 9: 227–228 (January 1902).

[4] The data in this paragraph are from "Letters of William Byrd II and Sir Hans Sloane Relative to Plants and Minerals of Virginia [1706–1741]," in the *William and Mary College Quarterly Historical Magazine*, ser. 2, 1: 186–200 (July 1921). See especially pages 188, 190, 192, and 196.

[5] William Byrd II to Col. Francis Otway, n.d., in the *Virginia Magazine of History and Biography*, 9: 129 (October 1901).

It was not an easy matter to secure and to ship such specimens as would prove acceptable to the European patrons. There was no quick mode of transportation, no certain roads to reach those districts where the choicest plants might be found. The long stretch of coast between the northern colonies and Florida was best covered by sailing vessels, a slow and tedious trip, but far easier and quicker than a push inland through wild unsettled country. The waterways were also the most practical path to the interior; streams deep enough for navigation might be traversed by canoe or other light boat. Even in more open regions, settled for a century, the roads were wretched affairs, not fit for coaches, mere expanses of sand and mudholes, or only narrow trails. The rider, uncomfortably mounted on horseback, must dodge the trees and bushes which overhung the path. Saddlebags served to hold the necessary provisions for the trip, clothing and blankets as well, while every crevice of the saddle pockets did double duty as containers for the slips and roots and seeds gathered along the way. Thickets and swamps must be explored on foot; only the scantiest of supplies could be taken—it was needful to rely on the produce of stream and forest or the donations of friendly Indians. There could be no wholesale gathering but only the taking of small samples that might be tucked away in coat pockets or bundled on the back. The total risk of such journeyings was great; the returns uncertain.

If it was difficult to secure such botanical curiosities, it was almost impossible to ship them intact to European patrons. Months might be spent in the painstaking gathering and careful preparation of specimens, which became a total loss in the course of the long sea voyage. The sailing ships which crossed the ocean were small affairs at best, dependent entirely upon wind and current for their speed; the length of the trip was a matter of weeks instead of days. Storms delayed the vessel until plants rotted and seeds lost their vitality; yet brisk winds and a quiet sea might just as surely bring a ruined cargo to port, due to improper packing. It was an irregular traffic, with no tried and certain methods about it either in consignment or in transportation.

If the shipment happened to be a large one, bulky as to size, consisting for the most part of roots, slips, or even whole bushes and young trees, it could be packed in earth, in casks and barrels, sent as freight, and stored as such. Sometimes these were thrust within the hold, but more often, roughly covered by tarpaulin or barrel staves, they were set out upon the open unprotected deck, at the mercy of winds, waves, and the inhabitants, both two and four legged, of the ship. The seas washed over them and soaked the earth with salt; the stormy weather set all awash. Worst of all, the "young callow rats" relished them as delicacies provided to tempt sea-jaded appetites.[6] Box after box, filled so carefully by the shipper with American rarities arrived in London with corners gnawed, plants stripped of leaves, with roots a mangled mass of fiber, while, carefully tucked away in the heart of the shipment were warm snug nests compounded of the leaves and stalks of the unfortunate specimens.

These four-legged pests merely destroyed and spoiled; the two-legged ones removed everything—they left no trace behind them. Sailors with gardening relatives, or persons who knew something of the trade, might see the bales and boxes so prominently displayed; searching for something of value, they took private opportunity to investigate and steal. Sometimes these "prying, knowing people" were selective in their tastes,[7] taking only the rarer and more curious of the lot; the common, the ordinary, they left untouched. Small boxes were apt to vanish completely during the transfer from ship to shore, thus losing the collector the entire results of his labor. These cheerful pilferings may have improved the public taste in gardening; they did little to encourage the trade in American plants.

When the assortments were compact enough, it was much easier to protect them against mishaps. A good-natured captain would usually allow a few small boxes, loosely fastened, with laths across "to keep the cats from scratching" them, placed in his cabin.[8] Somehow the picture of a rolling, tossing, small ship, the long days and weeks of trans-Atlantic trips, and these boxes of roots, hastily thrust under the berth to keep them from cattish curiosity, brings out the true character of the eighteenth-century sea captains; they were not only

[6] See Peter Collinson to John Bartram, Apr. 12, 1739, in *Memorials of John Bartram and Humphry Marshall, With Notices of Their Botanical Contemporaries*, by William Darlington (Philadelphia, 1849), 129.

[7] See Collinson to Bartram, Jan 20, 1751, in *ibid.*, 182.

[8] See Collinson to Bartram, Jan. 20, 1734/35, in *ibid.*, 60.

hardy, salty tyrants, they were the most forebearing mortals who ever walked a quarter-deck. Cats, plants, sharp-cornered boxes, heavy seas—anyone who could endure that combination in a tiny ship's cabin was a true martyr to science.

The smallest and most precious seeds had especial precautions taken for their protection. It was hard to find receptacles of convenient size and shape, so shift was made with tiny bottles, snuff-boxes, and the like. Snuffboxes of silver, tortoise shell, or even iron, tightly varnished over to keep out the air, were used most often. Grass seed was neatly packed in bundles of old linen and carefully stowed inside glass cannisters, with the hopeful addition of a bit of camphor, to discourage any stray insects. Nuts were waxed, as were large seeds, but never under any circumstances was the packing of seeds in folds of paper encouraged; the constant dampness found them, and they either sprouted too soon or rotted away. Bog moss and Russia matting made excellent overcoats for potted plants, as they kept out the air, but potted plants were not often included in a shipment; they took too much room and were far too unwieldy for convenient packing.

This trade in foreign rarities became at last so thriving that certain uniform methods of packing were contrived and adopted. There was even a 15-page pamphlet printed,[9] full of hints and ideas, together with the results of learned experiments as to the sprouting and germinating qualities of the seeds thus stored. The proportion of perfect shipments grew; except for careless factors, who piled box on box in dark corners of wharves and forgot them, the well-wrapped plants, the seeds, the nuts, came safely to their European destinations, there to be studied solemnly, counted, peered at, displayed, and at last hopefully planted in a special bit of soil.

The difficulties which tormented the shipper of plants and seeds across the ocean were met with in a lesser degree inside the Colonies. Nurseries and seedsmen had, for the most part, a limited and local clientele; not more than a few miles separated the estates and gardens from the concerns which served them. A farm cart could be sent to bring the fruit trees, the shrubs, the seeds for large plantations; a horseman with capacious saddlebags or equally capacious pockets could carry the bulbs, the seeds, slips, and roots for flower beds and greenhouses.

But for the indefatigable collectors, those seekers after rarities, there was no easy mode of transportation. After the Revolution the roads—never roads in the modern sense of the word—were often neither passable nor safe; armed escort was a necessity if anything of value was to be carried by coach or by horse. Even so short a distance and so long-established a road as that between New York and Philadelphia was sometimes dangerous to passengers and their baggage on the local stage. Gradually this improved; by the early nineteenth century the post was reasonably sure and secure. Anything small enough to be acceptable at the regular rates might get through in fair condition, after a not-too-long journey.

The stratagems of packing were many. Envelopes of seeds were enclosed in pamphlets; awkward shapes such as beans and peas were quilted into linen, and the cloth then cut the shape and size of a letter, well wrapped. Larger objects required more scheming, much cogitation. If Thomas Jefferson or Manassah Cutler or William Hamilton—three of the most avid horticulturists of early Federal days—visited a nursery distant from home, they had two choices of conduct open to them—to restrain their enthusiasms, or to make deep devious plans for shipping what they bought. Cutler, after buying plants in Washington, arranged for their journey, well packed in straw, by water to his Massachusetts home, a long and difficult sea trip, with as many hazards to the plants as a voyage to England might produce. Jefferson sent a small cart to Washington to bring his plants to Monticello, a comparatively short distance, but a hard trip for all that. Over and over the complaint was aired: "I do not know by what means I can send this," or "Look out for a safe way of conduct." When the President of the United States was reduced to catch-as-catch-can methods of conveying his purchases home, the lesser fry had little hope of success.

The stage passengers of the time must have been a good-natured lot; it was not uncommon for a harassed agent, after examining the embarking

[9] John Ellis, *Some Additional Observations on the Method of Preserving Seeds from Foreign Parts, for the Benefit of Our American Colonies* . . . (London, 1770). This pamphlet was preceded by his *Directions for Bringing over Seeds and Plants, from the East Indies and Other Distant Countries, in a State of Vegetation: Together with a Catalogue of Such Foreign Plants as Are Worthy of Being Encouraged in Our American Colonies, for the Purposes of Medicine, Agriculture, and Commerce* . . . (London, 1770).

passengers in careful speculation, to select a likely looking one, and thrust a parcel into his hands, with a hasty request that he look out for it along the route. The unfortunate traveler then found himself the chaperon of a bundle of raspberries, carefully wrapped in wet moss, or a "small light box" tightly packed with bulbs, plants, and trees. Students at the various colleges were much in demand as agents; they traveled back and forth from home to college between sessions, and, being supposedly of reasonable intelligence, might be expected to display some care on their parcels. It is amusing to imagine the reactions of a modern college student to a wet brambly parcel thrust upon him in addition to his tennis rackets, bags, and golf clubs; his prototypes seem to have accepted all this good-humoredly, as part of the exactions demanded of superior education.

Any chance conveyance was fair prey for the gardeners. A carriage taking members of a family on a visit was apt to carry along also a bag of bulbs, a collection of young fruit trees—the amount sent seemingly dependent on how much the springs would stand, rather than on the convenience of the passengers, who, after all must have been pretty well used to being uncomfortable. ("How nicely we are crammed in!" cried Lydia Bennett, as she rode with her three sisters, her neighbor, and a vast assortment of luggage home to Longbourn.)[10] No passing vehicle was safe from such attentions; a packet intended for Jefferson, transmitted from person to person, fell at last into the hands of a Richmond gentleman. About to put it on the stage, he happened to spy from his window a wagon, bound, he soon discovered, for the general region of Albemarle; delighted, he hurried to entrust the seeds to this most conveniently appeared transport.

Small wonder that subjected to so many difficulties and so many guardians, so many changes of weather, scions arrived minus buds, plants rotted, roots dried up, and seeds failed to sprout. Anne Randolph's melancholy words on the lot that the seedsman, Bernard McMahon, had selected with such care for Jefferson sums up neatly the all-too-common fate: "... the pinks Carnation's Sweet Williams Yellow horned Poppy Ixia Jeffersonia everlasting Pea Lavatera Columbian Lilly Lobelia Lychnis double blossomed Poppy & Physalis failed, indeed none of the seeds which you got from Mr. McMahon came up."[11]

Few people were qualified to undertake this strenuous and often dangerous job of collecting and transporting these products of the Colonies. It required at least a slight knowledge of botany—it was essential to know at sight the common from the uncommon, the welcome rarity and possible commercial plant from the ordinary and pernicious English weed. The habits and peculiarities of the plants had to be stamped well on the gatherer's memory; nothing so fragile that it would inevitably perish on the long journey must mistakenly be allowed to find a place in the final selection. Such work required a sturdy physique, for there were real hardships to undergo; it required a genuine interest in the plants and their peculiarities, an unwavering determination toward the securing of complete and unusual assortments. Many agents, with an eye solely to financial returns, stripped the neighborhood about their shipping port in a wholesale manner, leaving nothing for the more discriminating worker to send either by box, bottle, or pipe. One collector spoke plaintively of his troubles with a rival thus:

> I can't imagine how, or after what manner, or with what, James Alexander fills so many boxes; but this I know, he frequents the market, and discourses with all the people he can get any intelligence of, where any trees grow that he wants, and offers them money for any quantity they can gather of the seeds, if they will bring them to town. So that, when I go to gather seeds, where I used to find them, the people near where they grow will not let me have them; but tell me they will gather all to send to London. But where he gets so much Bog Moss to pack up his trees with, unless he fetcheth it from Jersey, I know not, nor what variety he puts in his boxes. We always speak friendly together, and visit one another; but do not communicate the affairs of our correspondents.[12]

Sometimes the plant collector was sent directly from Europe, a man of education, widely traveled, eager to add to his own experience as well as to the herbariums of his patrons. Pehr Kalm (1716–1779), one of the most enthusiastic followers of Linnaeus, was of this type. He spent three years

[10] Jane Austen, *Pride and Prejudice* (Oxford ed.), 221.

[11] Anne Cary Randolph to Thomas Jefferson, Nov. 9, 1807, in *Thomas Jefferson's Garden Book, 1766–1824* . . . , ed. by Edwin Morris Betts (Philadelphia, 1944), 353.

[12] Bartram to Collinson, June 12, 1756, in *Memorials*, 210.

in careful exploration throughout Pennsylvania, New York, and Canada, noting a countless array of subjects, both botanical and general. His observations ranged from the origin of Pennsylvania cows, the methods of planting grain, and the fondness of American horses for apples to the nauseousness of the skunk cabbage ("Among the stinking plants this is the most foetid"), the lice-killing qualities of hellebore, and the troublesome attributes of smilax which so interlaced the deep woods that it "forces you to stoop, and even to creep on all fours . . . and then you cannot be careful enough to prevent a snake from darting into your face." His many observations were recorded in his famous journal; his name is commemorated in the *Kalmia*, or mountain laurel.[13]

André Michaux (1746–1802) was collector for the King of France. He came first to America in search of useful timber trees, which might be employed in naval construction, but he found the botanical field so rich that he began to search for other plants which might reasonably be of value to his native land.

As it was essential that Michaux send his plants back alive to France, he started a sort of nursery where they might be kept until shipped; this was located, for convenience to the ports, in the Jersey pine barrens. Unfortunately for Michaux's reputation, this nursery attracted far more notice than it deserved; visitors expected a miniature Jardin des Plantes; instead they found an "awful, gloomy, lonely, miserable spot," the specimens arranged in no sort of order and far from thrifty. The attendants, though good-natured, were ignorant, unversed in botany, and unlearned in the art of gardening. The disappointed sightseers could not speak disparagingly enough of the "ill taste and judgment of this Botanical Frenchman."[14]

Ultimately these collections were sent to France. The Queen took half of them for her family in Austria, and the other half became completely lost. This embittered Michaux but did not diminish his enthusiasm for botanizing. By this time he had established himself on a plantation near Charleston, had traveled in Florida, and sailed to the Bahamas. A three-year trip west of the Appalachians added greatly to his stock but left him poor in purse and with little hope of repayment, for the government was now in chaotic state; the French Revolution had upset all his official connections.

After Michaux had covered a remarkably large part of America, added widely to the list of known plants, and made invaluable leads for future botanists to follow, he returned at last to France. But he did not stay there long; he embarked on his last trip, a trip planned for greater magnitude than any undertaken by him before; it was never completed, for he lost his life in Madagascar. *The North American Sylva*, by his son, François André Michaux, the companion of his journeyings, stands a memorial to his labors.

In general the European scientists and pseudo-scientists relied less upon such special agents and more upon willing, though less-experienced, persons who already lived in America. The advantages were many; such local collectors knew well the country over which they searched and could adapt themselves more easily to provincial conditions. Also, and a no inconsiderable item, it was much less expensive to employ a man who must be paid only for those objects which he secured and sent; a special messenger, sent from Europe, must be maintained, and his guides as well; the weeks or even months necessary for an independent trip produced sizable bills, sometimes entirely out of proportion to the botanical results.

The manner of contact followed a pattern. A Lord Petre or Lord Hopetown, desirous of rarities which he suspected could be found in North America, might write a friend in the Colonies, perhaps a fellow member of the Royal Society, stating his needs and asking for assistance. This correspondent, who kept in touch with the local collectors, would select the one who, in his estimation, best suited the execution of the commissions; he reported his choice, and the connection between patron and agent was complete.

It was in this fashion that the long association began between Peter Collinson (1694–1768) in England and John Bartram (1699–1777) in America. Through Joseph Breintnal, a member of Franklin's Junto, Bartram was recommended to Collinson as a farmer with a botanical turn of mind,

[13] Kalm's journal was first published in the original Swedish with the title, *En Resa Til Norra America*, in three volumes at Stockholm in 1753–1761. The first English edition, *Travels into North America*, was issued at London in 1770-1771. For Kalm's comments on the skunk cabbage, the hellebore, and the smilax, see *The America of 1750; Peter Kalm's Travels in North America . . .*, ed. by Adolph B. Benson (New York, 1937), 1: 256–257, 304.

[14] William Parker Cutler and Julia Perkins Cutler, *Life, Journals and Correspondence of Rev. Manasseh Cutler* (Cincinnati, 1888), 1: 291.

an honest and industrious Quaker who might welcome a chance to indulge a hobby, while profiting financially at the same time. For evidence, Bartram's botanical diary was dispatched to England; it was sufficient; at once there began a connection which lasted for over thirty years, a relationship impossible to describe, a friendship, not of master and servant, nor yet of patron and worker.

There was a paternal touch on Collinson's part. He issued advice freely, he interested himself in Bartram's family concerns, and he gave help freely where help was needed. In return he received a faithful allegiance to his interests, an extra measure of service, a client who consulted him on all his most puzzling problems, all the while maintaining a sturdy independence of thought and of action.

Born in 1699, John Bartram was of that period of American history which was neither the beginning nor the end of pioneering. The wilderness still existed, within easy reach, yet his own home was as peaceful and serene as an English cottager's. He might—and did—explore the frontier, but that frontier was not moved appreciably westward in his generation.

A farmer by inheritance and inclination, Bartram knew and cared little about the scientific side of his occupation. A sudden, unexplained interest led him to acquire the rudiments of botany; with the help of a Latin grammar and the aid of a friendly schoolmaster he picked up enough of the Latin language to use Linnaeus's botanical guides with some degree of assurance. This smattering of study, undertaken late in his life, was far from extensive, but it served his purposes. English-trained scientists marveled that a man who mouthed Latin names and appeared so totally ignorant of the simplest structural details should be so renowned. His enthusiasm grew with every plant he learned to classify correctly; he searched for unknown varieties; he penetrated to hitherto unknown parts to add to his list of botanical curiosities. It was when he had reached this point that the Collinson association began, providing a market for his discoveries, paying for his trouble and his pleasure with guineas and with gifts.

With encouragement, with a legitimate excuse for the indulging of his hobby, Bartram's trips grew longer and more varied. From the familiar country about Philadelphia, he explored the wild and unsettled lands toward the Catskill Mountains, pushing into New York, botanizing throughout Pennsylvania.

> I was on the top of the tree, when the top that I had hold of and the branch I stood on, broke—and I fell to the ground. My little son, Benjamin, was not able to help me up; my pain was grevious; afterwards very sick; then in a wet sweat, in a dark thicket, no house near, and a very cold, sharp wind, and above twenty miles to ride home. Thee may judge what a poor circumstance I was in; and my arm is yet so weak that sometimes I can hardly pull off my clothes. . . .[15]

Bartram was past sixty years old when he wrote of this mishap. Yet to him this climbing of trees —and subsequent falls—this exposure to the weather, incidental pains and sufferings, had become merely a part of an ordinary day's occupation, occurrences to be remembered, to be written about, but still only the expected incidents of his daily life. He had penetrated deserts, waded through snow to his knees, climbed pine trees in pelting rains, lodged in abandoned Indian huts the size of a hen coop, huts which abounded in lively and all-pervading lice which induced him, though unwillingly, to rise before the dawn. He had subsisted on musty provisions, eaten sparingly of Indian banquets of cold boiled squash, "poor entertainment" he called it, yet it was food and not to be despised. He had traveled mile after mile through unknown, unexplored country, alone except for the company of one of his small sons—few of his neighbors had the taste for such fatiguing expeditions—tracing rivers to their sources, noting mountains, discovering unmapped lands. Yet all this effort had for reward but a handful of holly berries, a basket of pine cones, a leaf, or the blossom of a pretty plant, common things, but sufficiently prized to warrant the expenditure of so much eagerness and zeal.

Bartram's specimens were a varied lot; seeds of every plant that struck his fancy, flowers if practical, or a leaf and a twig, any portion of the growing plant which little Billy Bartram, who had a pretty taste in drawing, might copy to send with the next London consignment. If there was any likelihood that it might stand the long journey, a whole plant was secured; a root was certainly taken; a description painstakingly compiled. On candlelit evenings, on Sundays, in spare time snatched from other tasks, Bartram and his numerous family—Benjamin, Moses, John, and Billy were the most frequent assistants—sorted out the specimens, dried and packed the seeds, prepared the plants

[15] Bartram to Collinson, May 22, 1761, in *Memorials*, 227.

which were still alive, for the journey, wrote out the minute and quaint descriptions and lists for England.

One sample inventory shows the nature of these shipments:

> I have put on board . . . one long cedar box containing a Hornet's nest, and a variety of seeds, for thee [Collinson]; and a box of curiosities and Musk-rat skin for Gronovius, which I hope thee will take care to send him, as soon and safe as possible. . . . I have sent, by the two last ships to London, five boxes in each ship; three in each of forest seeds, for those gentlemen thee sent me orders from; and a box with roots in earth for thee in one ship—in the other a long cedar box with a variety of seeds for thyself, and some curiosities for Sir Hans Sloane and for thee. I have sent, also, two quarters of Hickory, and a square box of plants in earth, viz., one root of my great Mountain *Magnolia*—several roots of Pawpaw, one fine root of our Laurel, full of flower buds, one sod of sweet Persian *Iris*, one sod of the fine creeping spring *Lychnis*, and a sod of what you call *Dracocephalum*.[16]

The implications of this last remark are revealing; there is no record of what Bartram himself preferred to call it. He had no personal pretensions of learning.

The payments that Bartram received were as varied as his cargoes. Collinson sent him clothing; a society of Edinburgh gentlemen repaid with a gold medal. Sir Hans Sloane, owing him 5 guineas, sent instead, at the special request of Bartram himself, a silver loving cup, with his name inscribed upon it, "so that when my friends drink out of it, they may see who was my benefactor."[17] And there were always the regular subsidies, the pools made up in England by his patrons, to whom he complained that he sent more than their money's worth.

For these patrons had become insatiable in their desires for rarer and stranger specimens. They praised Bartram's pains and the curiosities he sent them; yet " *'all desire new things; they are tired of old ones.'* " In reply, Bartram asked: "Do they think I can make new ones?" He then added: "I have sent them seeds of almost every tree and shrub from Nova Scotia to Carolina; very few are wanting: and from the sea across the continent to the lakes. . . . if I die a martyr to Botany, God's will be done. . . ."[18] Again and again he told them he had nothing new and then started out once more on fresh trips for fresh material.

Bartram went to Virginia on a jaunt that was half collecting and half inspection of the leading gardens there. Then he made shorter but fruitful trips to places within easier compass of Philadelphia. In 1760 he journeyed to Charleston, where he was feted, sought after, and began many new botanical connections. His last great expedition, in many respects the most important of them all, was undertaken at the age of seventy, when, due to the exertions of Peter Collinson, he had been appointed botanist and naturalist to the King of England, at a salary of £50 a year. King George had as yet paid little attention to the growing number of botanical discoveries in the Colonies. The creation of this post and the unusual benefits it might produce were hailed as hopeful indication that the monarch might at last become interested in this new field—to his own mental profit, if not to the financial profit of his subjects.

So Bartram, royally appointed, set sail for Charleston; from there he made his way to Florida, where he explored Saint John's River to its source, no small undertaking in those days. The book that he wrote upon his experiences is disappointing, considering the opportunities within his reach; it is concise and accurate but lacks the charming and unconscious humor of his letters and less formal reports. It did serve to open the way for further exploration and point the path for other collectors to follow.

In the midst of all this activity, the writing of reports, the preparation of lists and specimens, and the long arduous collecting expeditions, John Bartram still found time to make a garden for himself, a place where he could grow those plants which most intrigued him. They were arranged with no attempt at a beautiful effect, nor were they placed according to botanical classes. "Jumbled together in heaps," one disgusted visitor called them, yet they formed the first attempt at a lasting botanical garden in America. There had been earlier gardens—the German Pietists had established a garden in 1694 on the lower Wissahickon Creek where medical plants might grow and be studied—but that of Bartram was more comprehensive, more catholic in its content. There were 8 acres allotted to this purpose; within its limits there grew

[16] Bartram to Collinson, Dec. 10, 1745, in *ibid.*, 173.

[17] Bartram to Sir Hans Sloane, Nov. 16, 1743, in *ibid.*, 305.

[18] Bartram to Collinson, Aug. 14, 1761, in *ibid.*, 232.

in charming disorder northern natives, southern exotics, and English seedlings of long-established history.

Lady Petre sent pear seeds to Bartram. He planted them, and the Lady Petre pear tree became one of the leading curiosities of his garden, living for years in the new climate. His ginkgo tree originated in Japan, and his horsechestnut tree in England. There was a jujube tree, intriguingly named, a cucumber tree from Lake Ontario, a trumpet vine from North Carolina, and a cypress with an unusual history. This he had brought from Delaware, cutting it first as a substitute for a horsewhip, but his thrifty mind rejected such use and instead he placed it in his saddlebag; arriving home he planted it; it grew to be a giant, attained at last a height of 150 feet, with a span of life equal to its height.

Geographically this garden was noteworthy; botanically it was unique. Visitors came from all parts of the country to stare and to admire; fellow collectors arrived in search of the unusual; and botanists sought the reality of that which they had known before only by description or by hearsay. Bartram welcomed them all, added constantly to his oddities, and laid the foundation for other scientific collections by this free display of his own garden of enthusiasms.

In appearance John Bartram was as well worth attention as his flowers. Tall and dignified, erect of carriage, his face was long, though not a mournful length. Observers seemed most impressed by the appearance of great force of character, of mental powers sharpened, though never developed to their fullest extent. "It is a misfortune to the publick, that this ingenious person had not a literal education," one of his editors remarked.[19] He was full of enthusiasm, daring in the execution of his plans. "Nature's virgin charms were reserved to be rifled by an enterprising Bartram." "The hidden deeps cannot secure her treasure." Honest to a penny, faithful in his commissions, he could still secure his own advantage, be shrewd and clear in his dealings.

Personal appearance interested him but little. Those occasional suits of clothes which Collinson dispatched were received thankfully but without any great pleasure—a situation which the donor of the garments recognized and attempted to correct. When Bartram prepared for the journey to Virginia, a journey which was to include visits and calls on the Governor in his Palace, John Custis at his town house in Williamsburg, and William Byrd at Westover—the quality of the commonwealth—Collinson was emphatic on the matter of wardrobe. He himself might recognize the simple, sturdy virtues of his Quaker friend; others could not be depended upon to see his true worth, unless shown in outward appearance. ". . . make up that drugget clothes, to go to Virginia in," he admonished, "and not appear to disgrace thyself or me; for though I should not esteem thee the less, to come to me in what dress thou will,—yet these Virginians are a very gentle, well-dressed people—and look, perhaps, more at a man's outside than his inside. For these and other reasons, pray go very clean, neat, and handsomely dressed, to Virginia."[20] There is no detailed record of how well this advice was followed. Bartram had more invitations than he could well accept; he was overwhelmed with courtesies—courtesies beyond the common limit; it may have been the drugget clothes; it may have been the gentle manner; it may have been the rarity of a visiting botanist; the trip to Virginia was an unqualified success.

Bartram, in Collinson's opinion, was not only lacking in proper consideration for the effect of correct attire but in due regard for the ordinary forms and conventions as well. Constant gentle hints were dropped from London about essential politeness to patrons: "Lord Petre is a great admirer of your foreign wild water-fowl. If at any time an opportunity offers, send him some." The merchant could not forbear to add: "Thou will lose nothing by it."[21] James Logan (1674–1751), Penn's representative in Pennsylvania, maintained a fine garden at Stenton; he spared no effort to introduce English plants to America and to send in return new types for trial. To Bartram he was all kindness; he gave him books and aided him constantly in gaining European attention. Collinson reminded his correspondent: "It may look grateful, every now and then, to call and inquire after thy good friend Logan's welfare. He is a great

[19] John Bartram, *Observations on the Inhabitants, Climate, Soil, Rivers, Productions, Animals, and Other Matters Worthy of Notice, Made . . . from Pensilvania to Onondago, Oswego and the Lake Ontario* . . . (London, 1751), i.

[20] Collinson to Bartram, Feb. 17, 1737, in *Memorials*, 89.

[21] Collinson to Bartram, June 1, 1736, in *ibid.*, 77.

man in every capacity, and for whom I have the highest value."[22]

The letters were effective, the good advice well-taken, all in good part. Bartram sent little gifts to Lord Petre, called dutifully on Logan, but still sturdily refused to seek his own interest by currying favor with the great. If he sent a box to Sir Hans Sloane, or to Lord Petre, or to Collinson, it was because of the delight he imagined each man might find in the gift. He was a plain man, entirely without the political point of view; he sought for few indulgences and asked only for a competence—and for books to supply his recreation.

Books were hard come by, eagerly received, and pored over during the long winter evenings. Logan gave him John Parkinson's herbal, as representative of the best botanical writing; Collinson sent him a miscellaneous assortment, not only of works on botany but books of other description as well, with a view to the rounding out of that education which Bartram so ardently desired. Of the lot, but one ever called forth a protest; Robert Barclay's *Apology for the True Christian Divinity* was not entirely to his liking, but he sent his thanks, with a philosophic sigh of regret and gentle hint:

> . . . Barclay's *Apology*, I shall take care of, for thy sake. It answers thy advice, much better than if thee had sent me one of Natural History, or Botany, which I should have spent ten times the hours in reading of, while I might have laboured for the maintainance of my family.[23]

Almost every letter Bartram dispatched to London contained a request for books, scientific instruments, more books. Collinson began to fear that this passion for learning might injure his interest in business and reproved him, misquoting Solomon's advice, "And further, by these, my son, be admonished; of making many books there is no end; and much study is a weariness of the flesh," by saying: "in reading of books, there is no end." Bartram was more than ready with an answer: ". . . if Solomon had loved women less, and books more, he would have been a wiser and happier man than he was."[24] There was no retort; books, without comment, continued to arrive from London.

Bartram was not, however, for all his simple rural outlook, entirely lacking in the social graces. The very artlessness of his viewpoint, his manners, gave him a charm which appealed even to court-bred gentry. His command of his subject, the work in which he had spent his life, gave him sure prestige; his native graces made him welcome in whatever company he might be found. With botanically minded friends he could speak his mind freely, sure of a sympathetic audience; with others, his reputation alone was enough to ensure his good reception.

The hardships which Bartram underwent did not hasten his death; his plain and frugal daily life had inured him early to even extraordinary difficulties. It was the Revolution which broke his health by the fears it engendered; at his age he could not face the prospect of the depredations of war upon his cherished garden; he died in 1777, not knowing that the garden would live on after him, in a great public park, to keep his name and his memory fresh.

It is not given to many men to have their interests carried on by others of their family, with slight deviation from well-founded customs; the dynasties in American botany and gardening are few—Michaux and his son, the Princes, the Downing brothers—it is hard to remember many long established examples. The Bartram name and the Bartram collections were singularly fortunate; not only were they perpetuated, but given even wider fame in the second generation.

Strangely enough, it was not one of the steady dependable sons and daughters who thus continued the botanical line, but that one of all the family who had presented the greatest problem as to his training and his trade. Billy, engrossed in his "darling delight," absorbed by a drawing, pondering over a flower, "so whimsical, and so unhappy, as not to take any of his friends' advice," preferring to be "lost in indolence and obscurity,"[25] called forth more advice, required more wise council than all the rest of the family together.

"I don't want him to be what is commonly called a gentleman," his father observed plaintively. "I want to put him to some business by which he may, with care and industry, get a temperate, reasonable living."[26] Unfortunately for Billy, such businesses did not fit in well with his scheme of life; he was not unwilling to secure the temperate reasonable living. Sloth—all evidences to the con-

[22] Collinson to Bartram, Aug. 28, 1736, in *ibid.*, 81.
[23] Bartram to Collinson, July 6, 1742, in *ibid.*, 159.
[24] Bartram to Collinson, May 1738, in *ibid.*, 119.
[25] For these references to Billy, see *ibid.*, 200, 265, 283.
[26] Bartram to Collinson, Apr. 27, 1755, in *ibid.*, 199.

trary—was not one of his vices, but nothing seemed suitable either to his temperament or his training. Franklin offered to make him a printer, "a pretty, ingenious employ," and one which had made money for Poor Richard; Billy considered it, to find that Franklin was the only printer in Philadelphia who made any pretense of profit; there was room for no more in that trade. The same argument applied to surveying, an occupation which would make good use of the botany which he so much enjoyed; "but we have five times more surveyors already than can get half employ. If he could get a surveyor-general's office, for life, it might do."[27] But there were no openings; Billy did not attempt to enter the crowded fields.

John Bartram had one more suggestion; he had long considered the study of physic and surgery, necessary training for a doctor, as the most logical employment for Billy. Mature reflection convinced him that this would leave no time for the indulgence of his pet recreations. Hard manual labor did not agree with him; there were no posts open for amateur botanists or draftsmen. Congenial and profitable business seemed impossible to discover for this talented but exacting youth.

Meanwhile brother Moses went to sea. John assisted his father in the rapidly growing botanic garden, but Billy lingered on, drawing a little, botanizing a little, doing a bit of collecting, from time to time, accompanying his father on various trips. At last he resolved the family problem to his own temporary satisfaction; he moved to Cape Fear and went into a mercantile venture with an uncle there. The family was relieved; Billy had finally settled.

Peter Collinson was pleased but not entirely at ease. There was still something lacking in the way of stabilization; Billy needed an anchor to the windward—a wife—to make him appreciate to the full the joys of labor, to create a sober citizen from this incipient diletante. But matrimony was far from Billy's thoughts; no one project could occupy them long. He left Cape Fear, to homestead on the Saint John's in Florida; he abandoned that and became for seven years a nomad, wandering among "the swelling, green, turfy knolls, embellished with parterres of flowers and fruitful strawberry beds; flocks of turkies strolling about them; herds of deer prancing in the meads or bounding over the hills. . . ."[28] He explored tropical Florida and the great unsettled south, collecting, as did his father, specimens to send to London, observing the Indians, astonished at the alligators, writing his memoirs in a strange, inspired language which found ready response in Europe, a Europe whose poets echoed his descriptions in pictures like Samuel Taylor Coleridge's Xanadu:

> And here were gardens bright with sinuous rills
> Where blossomed many an incense-bearing tree;
> And here were forests ancient as the hills,
> Enfolding sunny spots of greenery.

There is a decided literary flavor to his *Travels*, a stateliness of feeling, a carefully chosen phraseology. Descriptions are given with due attention to scientific accuracy but in words which render them poetry:

> Solemnly and slowly move onward, to the river's shore, the rustling clouds of the Ephemera. How awful the procession! innumerable millions of winged beings, voluntarily verging on to destruction, to the brink of the grave, where they behold bands of their enemies with wide open jaws, ready to receive them. But as if insensible of their danger, gay and tranquil each meets his beloved mate in the still air, inimitably bedecked in their new nuptial robes. What eye can trace them, in their varied wanton amorous chaces, bounding and fluttering on the odoriferous air! With what peace, love, and joy do they end the last moments of their existance![29]

William Bartram (1739–1823) lacked his father's most compelling characteristics. Better educated, better fitted, with longer training for his profession, he still appeared the dabbler, rather than the authority; alone, he seemed unable to carry any venture to its complete end. His health was uncertain; on this account alone he was obliged to decline many honors and occupations, among them that of becoming the first professor of botany in America. Withdrawn from the world, he lived on into the nineteenth century, botanist, collector, author, dweller in spirit in that Xanadu he had perceived, carrying on his father's fame, but failing to reach the full satisfactions of that indefatigable adventurer.

John Clayton (c. 1685–1773) of Virginia was another ardent collector of native plants. Born in

[27] Bartram to Collinson, Sept. 28, 1755, in *ibid.*, 200.

[28] *The Travels of William Bartram*, ed. by Mark Van Doren (New York, 1940), 289.

[29] *Ibid.*, 88.

England, of good family, he came as a young man with his father to America. The elder Clayton was a barrister; he made a reputation for himself in his new location and was for many years attorney general. His children married into local families and became identified with the many plantations in the Williamsburg area. Young John, English educated, with his fortune yet to be made, married a girl of Gloucester County, became clerk of the county court, and settled into a placid existence on a little estate called Windsor. His leisure time was devoted to the cultivation of his crops and to the collection of botanical specimens.

At Windsor Clayton made himself a walled garden. In it he sowed the seeds and transplanted the roots he found on his collecting trips. He never went far from home but devoted himself to the thorough exploration of his immediate neighborhood. Those specimens which he could not plant he dried, carefully—"petrifactions," his son called them half-scornfully. Some of them he sent to Gronovius, who used them as the basis for a book; others he kept, intending eventually to write a book himself. This he never did; the drawings, the notes, the painstakingly made herbarium all vanished during the Revolution in the British raids on the peninsula.

The plantation was small; a hogshead or two of tobacco was all that could be sent on the occasional ship to England, there to be exchanged for the cheese, the wine, and the salt, which the family desired. Fortunately there was also an estate in Kent which Clayton had inherited; it was possible sometimes to sell off timber or raise rents sufficiently to provide for some of the luxuries he craved. With six children to educate and provide for, it was often difficult to make both ends meet, let alone indulge in such foolish tastes as literature and science.

Botany was his real passion; he obtained all the books and all the equipment on that subject which he could possibly afford. Colin Milne's *Botanical Dictionary* was a book he especially wanted; it was long in arriving but finally came. Mark Catesby gave him an autographed copy of his *Natural History*. Seeds of all sorts were sent him from London, often so slow in transit as to rouse his plaintive comment. With such equipment he could employ himself for hours; he paid his debt by sending American seeds to his benefactors; by 1739 he had already sent Gronovius enough specimens and descriptions of the local flora to allow the publication of the first part of his *Flora Virginica*.

It was near the end of his life that Clayton struck up a friendship with John Bartram, who seems to have roused his love and admiration as no other botanist had done. He wrote letter after letter to his "worthy friend," grieved that he was absent when Bartram visited Windsor, and grieved still more when that busy collector failed to answer his letters with the promptness Clayton thought they deserved. In imagination he followed Bartram on his travels, took deep interest in his discoveries, begged for samples, and eagerly offered of his own stores. He longed to see the famous garden in Philadelphia, filled with the spoils of so many trips, wrote mournfully to his friend of the untimely frost which nipped the tender bulbs in the Windsor garden, and ruined his Ixias and Leucojums.

John Clayton was eighty-eight years old when he received one of the two great honors of his life, one which must have gratified him exceedingly. In May 1773, a society was formed at Williamsburg, an organization with the comprehensive title of "Society for the Promotion of Useful Knowledge." The founders were mainly from the College of William and Mary, faculty and students like young St. George Tucker, filled with a lively curiosity for all the manifestions of nature, but a few interested nearby planters were included. Clayton was elected president; he lived but a few months to enjoy this dignity.

A more enduring honor was the naming of a flower for him. It was a pleasant and a pretty custom of the botanists to bestow the name of the discoverer, or of the first person who described a hitherto unknown plant, upon the plant itself. Spring beauty grows abundantly in tidewater Virginia; as *Claytonia virginica* it serves admirably to perpetuate the gentle botanist's name. The society of earnest investigators has long since vanished, but the delicate, soft pink flower still covers the woods and banks of streams in early spring, an ample tribute to John Clayton's work.

MY IMPRESSIONS OF WILLIAM MARSHALL

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Many men have had the temerity to propose to themselves a survey of the whole of England, but few have had the hardihood to carry out such a task by their own unaided effort and at their own expense. William Marshall (c. 1745–1819) set out to survey English farming, and he did it, a self-imposed task in the value of which he had unshakable faith, and which demanded the highest fortitude, and the most unswerving determination to complete. He carried out the job with a magnificent seriousness and so real an appreciation of the historical background underlying all such traditional occupations that I feel kindly towards him, an appreciation entirely lacking in the rather unduly progressive mental attitude of his great compeer and competitor, Arthur Young.

It was Young who won the guerdon of political recognition and government place, and Marshall strongly resented this because he had in fact suggested a national farming survey and a board of rural affairs, an idea which was supplanted by a board of agriculture promoted largely to do the survey without enlisting his experience and services. The result was that his *Review of the Reports to the Board of Agriculture* was somewhat acerbic. If Marshall's own account of the appropriation of his idea and the establishment of the Board of Agriculture in his absence in the remote Highlands of Scotland is accepted, that is not to be wondered at; but it must be remembered that Marshall, not unjustly, had a very good conceit of himself, and that Sir John Sinclair and Arthur Young may not have thought his presence or absence so important in carrying out their schemes and securing their own appointments as Marshall did.

Few details of his life before Marshall settled at Addisham in Surrey and commenced farming remain to us. He was baptized at Sinnington in the North Riding of Yorkshire on 28th July 1745 and proudly declared that he was born a farmer and that he could trace his blood through the veins of agriculturists for upwards of four hundred years, an ambitious and possible, though I fear rather improbable, claim. Nothing is known of his education but again on the authority of his own relation he was "trained to traffic" from the age of fifteen and wandered in the ways of commerce in a distant climate for fourteen years, when "a violent fit of illness" drove him home to the amenities of his native climate. These fourteen years may have been profitable in a financial sense—they were spent in the West Indies then a good prospect for the business acumen of a Yorkshireman—for the fact is uncertain except that he was able in 1774 to take a 300-acre farm, an enterprise which then as today demands the investment of a certain capital. Having taken this step his fate was sealed, and his life work laid out before him. But if he had not sacked his bailiff, George Black, on 18th July 1774, and become his own farm manager, he might not have achieved fame as a farming author, although I have little doubt that he would have written about any other profession he may have entered. His was another case of ink in the blood.

After sacking his bailiff, Marshall resolved to learn "tomorrow's management from to-day's experience, and next year's process from this year's miscarriages," so he had to keep a written account of his proceedings; and naturally enough when he had written it he found that he wanted to publish it, although he had long been convinced of the imbecility of books, a conviction that did not prevent him from adding substantially to their number. Once he had begun writing he could not stop and added to his exact "minutes" of actual happenings such reflections as occurred to him. The results he was vain enough to show to his friends and from their praise began to fancy them really important. Amongst others Marshall showed his "minutes" to the great Dr. Samuel Johnson, then the autocratic arbiter of British letters but drawing near his end, who carried his Sabbatarianism so far as to disapprove "of certain passages sanctioning work on a Sunday in harvest-time." With truly amazing subservience in one of his character Marshall accepted this dictum

and amended the work so that it might appear in terms of which Dr. Johnson did not disapprove. This his first book he placed before the bar of judgment of men who dare to think in defiance of custom but warned his readers not to accept his ideas without due deliberation, although he practiced them himself.

Though Marshall was inclined to think it exceptional, there was really nothing very startling, except perhaps to himself, in his management of his farm, judging by the best standards of his day. His record of what he did is informative just because it is that record, but it cannot have added much to the knowledge of his time. It may have spread that knowledge wider.

Already in this book Marshall began his lifelong criticism of the works of his contemporary and rival in the art of writing about farming, Arthur Young, whose *Tours* are so much better known today than Marshall's writings. He disliked the growing fashionableness of farming and described what he considered its rise and decline pungently.

> Until the present Century, Farming, like Religion, was an *hereditary mystery*, transferred from father to son, and had no other foundation than chance-produced CUSTOM; nor was actuated by any other motive than *Self*-EMOLUMENT.
>
> Reason found her plodding through a *narrow, blind-lane*—a *by-road*, full of sloughs and quick-sands.—*He* led her from the mire—dressed her in a decent, rustic garb—and introduced her to books. Books recommended her to SCIENCE.—Science, unfortunately, threw her in the way of TASTE;—and *Men of Taste!* mounted her on the Throne of ABSURDITY. . . . She is no longer an ART nor even a SCIENCE, but a chit-chat Companion to the FINE ARTS AND BELLES LETTRES! She resembles a ruddy, buxom, cottage-bred Country-housewife, bedizened in mode and muslin, parading the Mall of Taste amidst modern Petits-Maîtres.

And in proof of this contention in the celebrated *Tours* of Arthur Young one may see Corn-Sheaves, Sculpture, and Carrots; Bullocks, Belles Lettres, and Burnet; Paintings, Pigs, and Picturesque Views—round about the Maypole how they trot. The book must have had some success because Marshall followed it the next year with *Experiments and Observations Concerning Agriculture and the Weather* (London, 1779), but his writing then suffered an eclipse for some years as he spent the next five as agent to Sir Harbord Harbord on his estate in Norfolk. It was there that he began producing his 12-volume Rural Economy series, the first being *The Rural Economy of Norfolk* (2 volumes, London, 1787).

The proper way of gathering the material for such a survey had already been indicated in his *Minutes of Agriculture* under the date, 10th June 1777, so Marshall is clearly in the right of it when he said he had laid down these principles ten years before his *Norfolk* was published. The idea set out in the *Minutes* was again by way of criticism of the more superficial method of Arthur Young.

"*Agricultural Knowledge.*—How very little of that which is useful," Marshall wrote, "is to be acquired by *Touring!* I have rode *on horseback* four or five hundred miles; and, notwithstanding I have been incessantly observant, and frequently inquisitive, I have not picked up more than four or five ideas worth bringing home." He named them but ran on that nothing much can be learned by driving post through any particular district, nor even by riding 20 or 30 miles in an open chaise, that will gain the agricultural knowledge of that district—a feeling that I share about modern motorcar surveyors. Marshall thought that perhaps nothing but twelve months' residence, actual observations, and self-practice equal to the task. He then proposed that the Adelphic or some more "sanguine" society should place a number of proper persons, if such could be found, in the several counties most noted for agriculture, Essex, Norfolk, Yorkshire, Derbyshire, Lancashire, Leicester, Hertford, Wiltshire, and Kent, etc., and from their minutes "draw the present state and practice of English agriculture." The men were to stay in their county at least a year and if that was insufficient to return to it for some longer time. By the time Marshall produced the first of his series of surveys, he certainly had lived for more than a year in Norfolk, and quite apart from the detailed knowledge he must have acquired of the agricultural routine followed on the Harbord estates while agent there, he doubtless pretty well perambulated the county.

In the preface to his *Rural Economy of Norfolk* Marshall returned to this subject which was so close to his heart and recalled that in February 1780 he had submitted his Plan for Promoting Agriculture to the Society of Arts in London "as the first Society, professedly Agricultural, in the kingdom." This plan was nothing less than to minute the practice of the best farmers on the lines of his own *Minutes of Agriculture*. For this pur-

pose he intended to live in the house of one of the best farmers in a district where some good kind of farming should be carried on, e.g., breeding, rearing, and fattening of cattle, dairy management, sheep husbandry, the management of grassland or ley farming, and finally arable farming. He further intended to employ his leisure in taking "a complete Review of Written Agriculture, from Fitz-Herbert, in 1534, to the present time [1780]," excepting authors living at that time and after his judgment had been matured by a survey of provincial practice to compress into as narrow a compass as may be the useful information relative to British agriculture which had been already recorded, so as to offer to succeeding generations a comprehensive system of British agriculture as it then stood. This was no mean ambition for one man. Indeed it has taken me twenty-five years of my leisure to emulate his proposed course of reading.

Marshall left his employment with Sir Harbord Harbord in 1784 and went to live at Stafford near the junction of the four counties of Leicester, Warwick, Stafford, and Derby, where he remained till 1786. Here he spent his time collecting material for the next section of his national survey, having made repeated visits to Yorkshire, where he went from Norfolk in November 1782 for six months, but not being satisfied went there again in March 1787 and stayed nine months more. The results of passing the early part of his life in that county, of his later visits, and finally reviewing it analytically are embodied in his two volumes called *The Rural Economy of Yorkshire* which appeared in 1788.

In the wane of the summer of 1783, Marshall went to Gloucester to study cheese and cider making and lived in a farmhouse near the center of the Vale of Gloucester. Not satisfied with the results of such a brief visit, confined to one season of the year, he returned to the county for a stay (if I mistake not, for he is a little difficult to understand on the point) from April 1788 to May 1789, when he issued *The Rural Economy of Glocestershire*, which includes the dairy management of North Wiltshire and the orchards and cider of Hereford. *The Rural Economy of the Midland Counties*, the result of his residence at Stafford, appeared in 1790, and here once more he returned to his plans for the organization of improved agriculture.

As Marshall said, twelve years had elapsed since he first proposed his provincial colleges of agriculture, and this lapse of time had only impressed him more firmly with the need for such establishments. Claiming justly a wide knowledge of the nation's farming and its needs, he felt it incumbent upon him to intimate the probable advantages which might arise from a board of agriculture or rather of rural affairs.

In December 1790 Sir John Sinclair, who was then occupied with collecting materials for his *Statistical Account of Scotland* and with the establishment of the Society for the Improvement of British Wool, took an opportunity of introducing himself to Marshall, but it was not till the spring of 1793 that Sir John apprized Marshall of his intention of seeking authority from Parliament to establish a board of agriculture and funds to conduct it. Marshall was on the point of setting out for the Central Highlands where he spent some time on the Earl of Breadalbane's estates at Taymouth and some on the Earl of Mansfield's at Scone. He proposed arrangements for the farm land and also for the "picturesque" in the parks and forests of various estates and of course wrote a book about the farming—for the Board of Agriculture—the *General View of the Agriculture of the Central Highlands of Scotland* (1794). The publication of this report is about the only thing the Board of Agriculture ever did for him, and he proclaimed that, although Sinclair had assured him there was no immediate prospect of success for the idea, he had barely reached the Central Highlands before he learned of the Board's establishment and the appointment of Sinclair as President and Young as Secretary. This was, he boldly stated, no more and no less than a piece of political jobbery. "Thus," he added sadly, "fled my hope of credit (which I really expected) and all chance of profit (which I had not entertained) from my proposed Board of Agriculture." When his natural indignation had abated, he wrote to the Board from Taymouth on 11th September 1793, and offered "his general knowledge of the practice of the island (Wales excepted)" if it were considered likely to be beneficial "in revising the collections of the raw observers whom the Board must necessarily employ," a sufficiently patronizing act. The Board, however, pressed him to do the report on the Central Highlands, and he did it, he protested, because of their importunity and a highflying lure, the nature of which is not disclosed. Marshall was not without a ponderable

measure of self-conceit. He had also done part of a report, *Observations on the Different Breeds of Sheep*, for Sinclair's wool society in 1792.

From this time on to about 1808 Marshall seems to have lived in Clements Inn, London, in winter, and to have spent his summers visiting different parts of the country in accordance with the terms of his self-imposed task, which was completed by 1798. *The Rural Economy of the West of England* appeared in 1796 and *Planting and Rural Ornament* in the same year. Two years later *The Rural Economy of the Southern Counties* was issued.

Marshall completed a job which no one had ever succeeded in completing before although there had been tours in plenty and Arthur Young had collected a mass of current statistical detail that Marshall did not attempt to emulate. There is no doubt that Young's information was more superficial than Marshall's although the latter's criticism of Young's method is not absolutely valid. It was, however, more easy for Young to be deceived, and he admitted that upon occasion he entertained some doubts about what he was told.

What impresses me about Marshall is that he recognized the importance of history in the vestigial forms he found it here and there in his travels. Young was inclined to dismiss such things and to see only backward practices that rightly should be improved out of existence. Marshall recognized the importance of the "every year" land in Gloucester, the wild grass husbandry of the southwest and its social implications that are so informative (and to which I hope to return elsewhere), and he noticed that clover was probably grown in Kent a good deal before it was in Norfolk. A man after my own heart!

The early years of the nineteenth century enabled Marshall to complete another instalment of his plan. *On the Landed Property of England, An Elementary and Practical Treatise* was issued in 1804, having been preceded in 1801 by an essay *On the Appropriation and Enclosure of Commonable and Intermixed Lands* and followed by *On the Management of Landed Estates* in 1806, while he contributed to Alexander Hunter's *Georgical Essays*, volume 4, 1803, an essay "On the New Leicestershire Sheep."

One item by Marshall which I have not seen met with some approbation. It was an "Account of the Black Canker Caterpillar, which destroys the Turnips in Norfolk," contributed to the Royal Society of London's *Philosophical Transactions*, 73:217–222 (1783), and cited in William Kirby and William Spence, *An Introduction to Entomology* (ed. 1, 1:186), as the only authority for information on the subject. The article on Marshall in the *Dictionary of National Biography* errors in attributing *Arbustum Americanum: The American Grove*, a catalogue of American forest trees and shrubs, to him. This work, first published at Philadelphia in 1785, was by Humphry Marshall, the American botanist.

In 1808 Marshall's work had proved sufficiently remunerative to enable him to purchase a considerable property in the Vale of Cleveland in his native county of Yorkshire, and he lived there until he died in 1819. The year he settled there saw the issue of the first volume of his ambitious *Review of the County Reports to the Board of Agriculture*, which was eventually completed by 1817 and reissued as a whole in 1818. Naturally he could not restrain a gibe at these reports in his preface. His excuse was that the transactions of the Royal Society had been abridged with valuable effect and that the reports at large "seeing the magnitude of their bulk, and the comparative smallness of the useful matter they contain, may well be deemed a heavy tax on the time, if not on the purse, of the agricultural public. Their voluminousness certainly debars many practical men from profiting by the useful parts of their contents." Moreover they had been compiled on a confused version of his own plan. Marshall did not think such a survey should be made by reference to the administrative boundaries of counties, and his comments on the subject, first made in May 1796, recall the remarks made at a conference of historians and geographers in 1947.

> But, in examining a country, like England, with a view to the existing state of its agriculture, and the other branches of its Rural Economy, the arbitrary lines of counties are to be wholly disregarded. For if any plan was observed in determining the outlines of provinces, in this island, it certainly had no reference, or alliance whatever, to agriculture; unless it were to divide, between opposing claimants, the natural districts, which required to be studied, separately, and entire. Natural, not fortuitous, lines are requisite to be traced, agricultural, not political, distinctions are to be regarded.

How old are the newest ideas!

Marshall was not quite such an original as he himself conceived. The idea of agricultural

colleges had been mooted in the days of the Commonwealth by Samuel Hartlib, and the idea of rural observators or what we should now call economic surveys had been in the minds of men at least since about the same time. Nevertheless, he was the man for the job, and he had the right ideas about the way to do it, and he had the determination to do it. As J. C. Loudon said in his *Encyclopaedia of Agriculture* (1825), Marshall was "a man of little education, but of a strong and steady mind; and pursued in the most consistent manner, from the year 1780 to his death, the plan he originally laid down; that of collecting and condensing the agricultural practices of the different counties of England, with a view to a general work on *Landed Property*, which he published; another on *Agriculture*, which he did not live to complete; and a *Rural Institute*, in which he was supplanted by the Board of Agriculture." He was engaged in erecting a building at Pickering in which to establish an agricultural college when he died, and in addition to his other preoccupations he had during the last years of his life collected a vocabulary of Yorkshire words numbering about 1,100.

Such was the man of whom Lord Ernle, himself a successful politician, could write of as "an embittered, disappointed man, who had himself originally suggested the establishment of the Board and the compilation of the surveys." But alas there is no punishment for the successful appropriation of ideas, and Marshall was justly incensed about this calmly effected theft. He took the best way out and continued with his own plans which he brought to a satisfactory conclusion and was more justly estimated by John Donaldson in his *Agricultural Biography* (1854) when he wrote of him that "As a rational observer and practical compiler Marshall was most decidedly superior to Young." Both men, of course, did good work, and the merits of their respective methods could still be a matter for controversy. A lengthy residence in a district is, however, likely to inform an observer rather more fully than a cursory visit.

THE FRENCH AGRICULTURAL QUESTIONNAIRE OF 1814

The Circular Letter of Becquey, The Model Agricultural Questionnaire, and the Reply for the *Arrondissement* of Lisieux

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In 1914 the French Ministry of Public Instruction and Fine Arts, through its committee on historic and scientific works, published a volume entitled *La Statistique agricole de 1814.* It consists of partially edited documents that provide statistical data on the agriculture of France in 1814 and information on the agricultural conditions and practices then prevalent.

The occasion for this compilation was a communication which the committee had received from the archivist of the department of Nièvre entitled "La tentative de statistique agricole officielle de 1814 et sa réalisation dans la Nièvre." The committee found the contents of the article of such value and interest as to warrant a general request for all departmental archivists to prepare similar reports. This was feasible inasmuch as the article on the department of Nièvre contained and made reference to certain documents issued, under the date of December 30, 1814, by Louis Becquey, Director General of Agriculture, Commerce, Arts and Manufactures of the Ministry of the Interior, to the prefects of *all* the departments.

There were three documents involved. The first was a circular letter by Becquey to the prefects; the second, an agricultural questionnaire which was to be answered with pertinent data for the year 1814 and also used as a model form for all subsequent annual reports on the state of agriculture in the respective departments; and the third, a questionnaire originally issued in January 1812 by the Minister of the Interior to the subprefects relative to agricultural conditions in their *arrondissements*.

Sixty of the departmental archivists responded to the committee's request in 1914 for a report on the disposition of these documents of 1814 in their

respective departments. The replies of eighteen were completely negative; twenty-three could not furnish the specific documents and data requested, but they did submit material of approximately the same character and value; and nineteen archivists achieved a measure of success in that they produced for the whole or part of their departments responses to the documents of 1814 or to the questionnaire of 1812.[1]

To a certain extent the Archives nationales of France compensate for the absence of department documents pertaining to the fact-finding project here considered. Unfortunately, the data in the Archives nationales on the 1814 documents are, according to the committee report, very incomplete, but the depository does have annual accounts for 1815 on the departments of Averyon, Gers, Rhône, Tarn, and Tarn-et-Garonne.[2] With a few exceptions, the departments of eastern and northeastern France were unable to submit affirmative reports in 1914 because of the destruction and disappearance of documents during the preceding century.

The circular letter and questionnaire of 1814 were the work of Augustin-François Silvestre (1762–1851),[3] the famous agriculturist who was chief of the agricultural division of the Directory General and for a considerable time secretary of the Agricultural Society of Paris. It may also be noted that, according to the archivist of Nièvre, the suppression of the Bureau of Statistics in 1814 in no way affected purely agricultural statistics. By a royal decree of May 16, 1814, the agricultural section of the Ministry of the Interior was apparently combined with the division of manufactures, construction, and useful arts of the Ministry of Manufactures and Commerce and constituted a new Directory General of Agriculture, Commerce, Arts and Manufactures (headed by Louis Becquey) within the Ministry of the Interior.[4] There was a second circular letter of May 2, 1815, signed by Carnot, Minister of the Interior during the Hundred Days, in which he called the attention of the prefects to the letter and questionnaire of 1814.[5]

The competence of the prefects and subprefects to acquire data and prepare accurate reports based upon the questionnaire may well be questioned. On this point no arbitrary generalization can be made for their degree of competence varied with each department and with the political and economic conditions existent in the department at the time. Any judgment of the results is, of course, also dependent on the standards that one establishes. The subprefect of the district of Lisieux frankly stated in his letter of submittal, dated February 9, 1815, that: "This work has been compiled with the greatest possible care. However, I make no pretense that it comprises rigorous exactitude in all of its component parts, but I have attempted to ascertain the truth in so far as it has been possible to do so."[6]

Granting the competence of the reporters, there is also the question of whether the circumstances were conducive to the attainment of the objectives of the questionnaire. Relative to this question, it will be remembered that France had been at war almost continuously since 1792, that by 1814 the nation had been bled of resources and manpower, and that the nation was facing political problems of the highest magnitude among which were the defeat, invasion, and occupation of France by the allied forces, the first Bourbon Restoration, and the treaties of Paris and Fontainebleau. It will also be remembered that the Bourbon emigrés, like so many observers of France since that time, allowed themselves to be misled by the superficial appearance of the country and either could not or would not see the real economic conditions and trends beneath the surface. They wished to think that France and particularly its rural areas had not changed since 1789, and the peaceful pastoral scenes of France encouraged that false concept. Politically the rural areas in 1814 and after were still predominantly conservative if not actually

[1] France, Comité des Travaux Historiques et Scientifiques, *La Statistique agricole de 1814* (*Notices, inventaires et documents*, tome 2, Paris, 1914), ii–iii.

[2] *Ibid.*, iii.

[3] *Ibid.*, iv. The Agricultural Society of Paris awarded Thomas Jefferson a gold medal for his "mouldboard of least resistence" and made him a foreign associate of the society. In a letter of May 29, 1807, Jefferson thanked Silvestre as secretary for these honors. See *Jefferson and Agriculture: A Sourcebook*, compiled and edited by Everett E. Edwards (Washington, D. C., 1943), 73; and *The Writings of Thomas Jefferson*, edited by Andrew A. Lipscomb and Albert Ellery Bergh, 11: 212–213 (Washington, D. C., 1904).

[4] *La Statistique agricole de 1814*, iv, footnote 2. See also J.-B. Duvergier, *Collection complète des lois, décrets, ordonnances, règlemens, avis du Conseil-d'État*, 19: 39 (Paris, 1836). This ordinance was abrogated on Dec. 14, 1815.

[5] *La Statistique agricole de 1814*, iv, footnote 1.

[6] *Ibid.*, 120, footnote 1.

apathetic to public affairs altogether, but the fundamental reforms of the Revolution and Napoleon remained as did the advent of the Industrial Revolution. In any case the *ancien regime* in France's rural economy was gone.

La Statistique agricole de 1814 has been frequently used by authorities on the history and economics of the Bourbon Restoration period. No part of it has, however, been made available in English to students of general economic history or to those interested primarily in agricultural history. Furthermore, since the degree and character of the present postwar recovery of France is one key to the political and economic future of Europe, it might be well to examine more closely the conditions and trends in France after the Napoleonic period if only for the purpose of contrast.

The following translated and edited material consists of three documents, namely the circular letter by Becquey, the model form questionnaire of 1814, and the reply to that questionnaire by the subprefect of the district of Lisieux, department of Calvados, in Normandy. The text of the questionnaire of 1812 is not included inasmuch as it contains the same subject matter as that of the questionnaire of 1814 but in shorter form. Moreover, reference is made to parts of it in the footnotes for the reply to the questionnaire of 1814.

The reply of the subprefect of the district of Lisieux has been selected for several reasons. This report is one of the most complete of all those submitted; it is from a predominantly agricultural region, and it pertains to a district which was not directly affected by the Napoleonic wars but which was devastated by the military operations immediately subsequent to D-day in 1944. A study of this district may, therefore, have a greater meaning to the general student of French agricultural history than one more remote or less developed agriculturally. A study of the questionnaire and the reply of the subprefect of Lisieux may also be of interest to those readers familiar with federal and state agricultural forms and similar questionnaires of associated agricultural agencies in the United States.

Figure 1. Lisieux and northwestern France. The towns with names underscored, *i.e.*, Caen, are mentioned in the documents.

If the questionnaire had been absolutely and uniformly complied with throughout the nation, a most comprehensive account of the contemporary economic conditions of France would have been obtained. The subsequent events in French history and the reactionary policies and practices of the Bourbon regime prevented the practical realization of the values of these documents toward the real economic reconstruction of France.

The Circular Letter[7]

In a state which is essentially agricultural, such as France, anything which concerns agriculture is not to be regarded indifferently by the government. It is not sufficient to give it only general regard; the government is bound to extend throughout all its ramifications superintendence and protection which serve or can serve in the maintenance of this principal source of our prosperity. It is necessary, therefore, to ascertain the actual state of agriculture in each of the departments, for the administration to receive for the period at hand sufficient detailed and positive information on each branch of the rural economy, in order to judge their progress, to better acquaint itself of their produce, to appreciate their needs, and to be able to direct encouragement or assist on those phases where they would be recognized as profitable.[8]

The information of which I shall come to speak must be furnished by the prefects; they have already communicated material by correspondence that I have examined with the greatest attention. I have observed that one after another frequent

[7] "Circulaire de Becquey, directeur général de l'agriculture, du commerce et des arts et manufactures, aux préfets. Paris, 30 décembre 1814," in *ibid.*, iv–viii.

[8] This paragraph is one of the first of many similar lofty pronouncements which remained unfulfilled through the Restoration period.

requests for information have been made of them which must have necessarily caused them considerable extra labor both because of the investigations involved and because of the multiplicity of the reports and lists which were demanded of them. It has seemed to me that they ought to be able to simplify the progress of their work, reduce it, and thereby render it less laborious, and give it at once a greater degree of exactness and, by consequence, of utility. This consideration accords itself forcibly, moreover, with the sincere desire which I have to facilitate as much as possible the relationship between you and this part of the general administration of which I am in charge.

I am thus concerned with the examination of measures by which this double objective can best be fulfilled.

The results, for the most part, of the inquiries which the government has required you to submit, are compiled in numerical tables, of difficult construction, minuteness, and done in much haste as the objectives were too often inexact.

I have judged it preferable to collect this material in a report of observations arranged according to order of subject, in the form of accounts of the situation which the prefects are accustomed to furnishing quarterly to the Minister of the Interior on the diverse parts of their administration.

These reports are to be drawn up and are to be transmitted as of the first of January of each year; there are to be attached as data statistical tables but only for articles judged to be capable of being thus reduced.

I trust that this form of correspondence will carry out sufficiently the views of the government, that you will be able more easily to adapt yourself to them exactly; and finally, the wording of your accounts be taken care of, as I have reason to expect, so that their collection shall offer, by sequence, vital notations to be consulted on each phase of rural economy, and, by consequence, the means of arriving at the knowledge of the situation relative to each of these phases in all parts of the kingdom.

At the same time, the investigations, which you will make, will keep you abreast of this essential portion of your administration and will put you in a position to answer, in detail and with accuracy, questions which might be put to you on certain articles, according to the circumstances.

Consequently, I am going to outline for you the plan of the account which I urge you to transmit to me regularly each year at the time indicated above. That of 1814, to be presented on the first of next January, should be submitted to me as soon as possible *and at the latest by the first of March, 1815.*[9]

The annual accounts ought to be set up so as to be divided into four chapters:

1. Use of the land.
2. Its produce.
3. Animals employed in agriculture.
4. General observations.

The questions which are to be attached to each chapter are explained in detail in the model form hereto added.

I urge you to note that those [questions] relative to the first chapter presuppose a general and preliminary notion about the condition of agriculture in your department. They ought to be obtainable from replies made to a series of questions addressed in 1812 to the subprefects, and a copy of which you will also find herewith attached.

If these replies have not yet been supplied for your department, I urge you to be so kind as to obtain them early enough so as to be able to attach them to the next report together with your remarks anent the accuracy of the details which would be entered there.

I attach a most special importance to those articles contained in the second and third chapters, not only by reason of the interest which they present, but because at the same time they ought to facilitate the judgment on a multitude of other matters which are inseparably bound to agriculture. I can not urge you too strongly to use special care in drawing up the small number of lists which I have deemed indispensable. I have reduced their number and simplified their form as much as it was possible for me; I leave you free to refer to the lists of the same kind which you would have been in a position to furnish during the course of the year for the service under my control.

You can refer also for certain articles to the annual of the department, if it is customary to publish one, and you will please attach two copies of it to the annual report, by the aid of which you will produce it. I desire at the same time that this consignment of the annual be submitted regularly each year; by means of which it shall suffice that you cite this work with sufficient exactness and accuracy the articles which you believe need explaining.

[9] The words in italics represent a subsequent addition to the manuscript. *Ibid.*, vi.

In the enumeration of species of cultivated plants or of products, it is not possible for them to be the same for all the departments. It has not been my intention to present to you in the plan of work hereto attached the framework and order in which I would desire that each article be arranged. I depend, moreover, entirely on you to limit this framework or add to it according to the needs and characteristics of your department. Nevertheless, I regard as important that the articles are always mentioned and classified according to the order indicated in the accounts which you transmit to me, and finally, to facilitate the inquiries, to give to your work the results and methods which will add further to its interest.

I have not enlarged upon the chapter of general observations, of which it is very susceptible, but I have merely requested you to attach notations of facts or of institutions which relate to the agriculture of your department, and to which they contribute in arriving at a better knowledge, to facilitate progress or to give it a new direction, if it is necessary. I have believed it proper to incorporate into this chapter summary notes on works and manufactures existing in the department and principal sustenance from the products of its soil; at the risk of your having to recall, for the details, the most developed phases which you have been in the position to furnish me on these objects.

I believe, finally, it is superfluous to stimulate your emulation on a work of such importance of which you have already engaged; I have only to await the satisfactory results, according to the attention and the progress that I please myself to believe that you will use.

Accept this, etc.

The Questionnaire[10]

Chapter I. Use of the Land

1. Land under Cultivation

1. Extensive cultivation. How many hectares are there in use? Is it increased or decreased? How many hectares of land plowed? Is it worked by oxen or with horses? What is the proportion of enclosed land? What is the character and extent of the fencing?

2. Minor cultivation. Its extent? Increased or decreased?

3. Enumerate the different plants cultivated on a large scale in the department:

(a) Cereals.
(b) Small grains.
(c) Textile plants.
(d) Plants containing oils.
(e) Plants containing dyes.
(f) Vegetables.
(g) Tobacco.
(h) Potatoes.
Etc. etc.

Designate the degree of importance attached to each of these cultures. Their extent more or less and their success.

4. The application of lime. Is it in use? Does its use produce desirable results and what of its extension?

[10] "Modèle de compte annuel a fournir par Mm. les préfets concernant l'état de l'agriculture dans leurs départements respectifs," in *ibid.*, ix–xv.

2. Grasslands and Pastures

1. Temporary pastures. Their extent, increase or decrease, their condition, their success.

2. Natural grasslands. Their extent. What portion of them is subject to irrigation? Their condition.

3. Pastures. Their extent. Species of animals that are sent to them. Continuation of the pastures. Notes on the number of animals of each species that is regularly fed per hectare.

4. Marshes. Are they extensive and susceptible of being drained? What are the proposals, the projects, the works involved in this topic?

5. Peat bogs. Are they entirely or in part for fuel, or for feeding animals?

3. Plantations

1. Woods. Their extent.

(a) Timber. Its regular exploitation. Species of trees of which they are composed. Amount of annual cutting. Usage that is made of it. Notes on the products that are derived therefrom, other than the lumber, such as acorns, nuts, resins, etc.

(b) Underbrush. Its use. Number of hectares to be cut or cut during the year.

2. Fruit orchard culture. Enumerate the species cultivated, with notes on the extent of the culture of each species.

3. Nurseries. Their extent. Their character. Their condition.

4. Vineyards. Their extent. Their quality. Their condition.

4. Waterways

1. Rivers. Accidents occasioned by their courses.

(a) Navigable.

(b) Floatable [by rafting].

Notes on the transportation which is made by water; on the towing; on the number and the kinds of animals which are employed; on the fishing.

2. Canals. Their description. Projects for enlargement. Accomplishment upon those on which construction is ordered. Transportation; same as the question pertaining to the rivers.

3. Ponds. Their extent. Their produce. Drainage proposals, projected or in the process of completion.

5. Wastelands

What is their condition? What value is derived from them? What percentage are they judged capable of being cleared? Means employed for determining this operation. Progress of clearing undertaken.

6. Highways and Local Roads

This article ought to be considered here only under the report on means of communication or transport necessary to agriculture.

Are the existing means of communication considered sufficient? Are they practical at all times or only during certain seasons? What improvements are required for agriculture? What facilities does the country have to offer for this work? Work done during the year.

7. Rural Constructions

Details on the dwellings in use by agricultural laborers, on the improvements possible to project, achieved. Farm implements. A drawing of the plow or of various types of plows in use.

CHAPTER II. AGRICULTURAL PRODUCE

1. Cereals

1. Wheat.
2. Rye.
3. Barley.
4. Maize.

An annual table presenting the numerical quantity of grain of each species harvested in the department.

[An annual table] of those necessary for consumption in the department.

[An annual table] of those exported or imported.

2. Lesser Grains and Edible Roots

1. Oats.
2. Buckwheat.
3. Millet.
4. Potatoes.
5. Beet roots.

Etc., etc.

Quantities harvested, consumed, exported or imported. An annual table.

3. Textile Plants

1. Flax.
2. Hemp.

Quantities harvested, used, exported or imported. An annual table. Notes on the methods used in retting.

4. Other Plants Cultivated Extensively

1. Plants for dyes.
2. Vegetables.
3. Tobacco.

Notes on their harvest, on their use in the department or beyond. On importation of these same articles.

5. Forage

Indicate, in metric quintals, the quantity of fodder harvested in the year. Is it consumed in the department? Is there any surplus exported? From where is it imported? Annual table. Notes on the sale or purchase of grains which have taken place.

6. Forests

Notes on the quantity obtained from cutting wood for fuel, lumber for construction, lumber for industry, such as those destined to cooperage, to trellis, for lathes, etc. Charcoal. On their consumption in the department. On its exportation or importation. On the quantities of resins and other products extracted from wood.

7. Fruit Orchards

1. Chestnuts. What has the harvest been—good, fair, or poor?

2. Fruits with stones. Quality of the harvest.

3. Cider-producing orchards. Annual table of their production, in hectoliters. Domestic consumption. Amount exported. Current prices.

8. Wines

Annual table of wines produced in the department, to conform to the model attached to the circular of February 28, 1813.

9. Oils

Annual table of the harvest in these kinds, to conform to the model attached to the circular of February 28, 1813.

CHAPTER III. ANIMALS EMPLOYED IN AGRICULTURE

1. Horses, donkeys, mules. Their number. Their use. Their trade. Their reproduction. Their improvement. Annual table.

2. Horned animals. An annual table to conform with the model annexed to the circular of May 22, 1813.[11] Detailed notes on the trade in butter and cheese which has taken place in the department.

3. Sheep. Annual table conforming to the model annexed to the circular of August 10, 1811.

Notes on the methods of extending improvement. On the type of flocks. Employment of shepherds and dogs. Sheep pens. Food for the flock. Its character. Its duration. Expense and production of the diverse types of flocks.

Commonage. Is it in use? In what manner is it used? What inconveniences are there? Measures taken or to be taken in order to remedy this.

Common flocks. Their number. Their composition. Pastures reserved for their use. Improvements attained among these flocks.

4. Swine. Notes on their number. Trade which is carried on with other regions, either in live animals, or in cured form. Regular consumption which takes place in the department.

5. Goats. Solely in the case where they are kept together in herds in the department. Their approximate number. What advantage is derived from them.

6. Bees. Is care taken in their breeding? Its extent? How is it practiced? Evaluation in weight of the quantities of wax and honey that they have furnished during the year. Average price of this product.

7. About silk. Establishment on a large scale. Mulberry tree culture. Their success. Annual table on production of silk, in conformity with the model annexed to the circular of July 30, 1813.

[11] Copies of this and other circulars referred to by Becquey were not available to the author, and they are not in Duvergier's *Collection*.

8. Detailed notes on the diseases which are prevalent during the year among the diverse species of domestic animals. Evaluation of the losses which result therefrom.

CHAPTER IV. GENERAL OBSERVATIONS

1. State of the weather during the year; its influence on vegetation, on the periods of the seasons, the harvests; designations of these seasons. Meteorological observations, if it is the custom in the department to make them.

2. Circumstances which are favorable or hinder agricultural work. Scourges which are harmful to the crops. Details on the losses that they cause.

3. Progress of the rural economy during the year, either by the introduction of new cultures or by the perfection of old ones. Details on this subject. Remarkable enterprises, and those that merit the attention of the government. Repair of roads. Their progress. Means of assistance. Obstacles which oppose their extension.

4. Work of agricultural societies. Their composition. Their influence in the country. Encouragements which they give or for whom they are needed.

5. Veterinarians. Their number. Their influence. Their services. Are they much employed in the country? Indicate those who are the most distinguished.

6. Cost of the necessities of life, and of the day's wages for work. Compare these prices with those of 1789. Increased or decreased during the years.

7. Do a great number of the proprietors farm by themselves? What is the method most used for renting—by leases or profit sharing? What is the duration of the leases? What are the conditions of cattle leased out?

8. Milling economy. Since when was it introduced? What of its progress?

9. Rural police. Constables (or gamekeepers). Their number. Their salaries. Their influence. Their conduct. Rural crimes. What are the most common misdemeanors? Have they become more or less frequent? How are they suppressed? Notes on the established customs in the department relative to gleaning, removal of stubble, of rights to kindling wood, of lesser gleaning. Disadvantages which result from the existing customs. Are the beggars and vagabonds numerous in the country? What are the results of measures taken to restrict them?

Arrondissement of Lisieux: Annual Account for 1814[12]

Chapter I. Use of the Land

1. Land under Cultivation

1. Extensive cultivation. A superficial estimate of the land under cultivation is approximately 80,000 hectares; extensive cultivation employs about one-fourth, that is, about 20,000 hectares. For a long time, this has neither been increased nor decreased. A plow is essential for about every 20 to 25 hectares of land.

The work is sometimes done with oxen and horses and sometimes with horses alone. The proportion of enclosed land in comparison with that which is not enclosed is as one to six. There will be found a copy of the nature of enclosures in the reply to the eleventh question of the report of 1812 which is attached to this present report.[13] If, on the one hand, some new enclosures are made, on the other hand, some hedges are pulled out from time to time in order to form clusters of hedge so that the total increase or decrease is only a very limited extent.

2. Minor cultivation. Relative to this, one may state that its extent is about 60,000 hectares; it has neither increased nor decreased.

The different plants cultivated in the *arrondissement* are:

In cereals:

1. Wheat;
2. Rye and mixed wheat and rye;
3. Barley.

In common grains:

1. Oats;
2. Potatoes.

In textile plants:

1. Hemp;
2. Flax.

Vegetables:

1. Peas;
2. Beans, both large and small.

All of these products are raised with care, but those which are considered the most important are wheat and barley. The culture of one plant does not extend over that of another; the production of one year is the same as any other or nearly so. All are equally successful because each product receives the care in cultivation that is required for it except for misfortunes arising from seasonal bad weather, but which fortunately is very rare.

The use of lime for grain is restricted to certain areas of the *arrondissement*; this procedure is sometimes successful, but also sometimes it is more injurious than profitable; it is not, therefore, extensive.

2. Grasslands and Pastures

1. There exists no artificial grasslands.

2. Natural grasslands. The extent of these prairies is, as one is able to see from the reply to the first question of the report herewith attached,[14] about 20,000 hectares; about one-fourth is under irrigation; its condition is also improved by manure which has been carefully spread on it.

3. Pastures. The pastures are very extensive; they represent approximately 215,000 hectares.

[12] "Arrondissement de Lisieux compte annuel de 1814," in *La Statistique agricole de 1814*, 120–137.

[13] Question 11 of the Questionnaire of January 1812 read: "Is the land enclosed or not? If it is, what type of shrub is used to form the hedges and what care is given to them?" *Ibid.*, xvii.

The subprefect's reply was: "One can safely say that in each commune there exists some enclosed fields and some which are not. The shrubs which serve to form the live hedges are hazel copse, willow, hawthorn, black hawthorn, and elder. At intervals there are planted among the hedges oak, elm, ash, aspen, beech, and poplar. After having reached a certain size they are cut down to about 8 feet above the ground. Though stumps remain they are subject to pruning about every 6 years as are the other trees. One supports the hedges by bringing them together and forcing, with binders 2½ feet from the ground, branches of trees stuck in the ground opposite each other on each side of the hedge, by means of other branches placed crosswise, which are called crossbinders and which serve to support the first binders and reduce the volume of the hedge." *Ibid.*, 141.

[14] Item 1 of the Questionnaire of January 1812 read: "What is, in the district, the superficial extent, at least approximately, of cultivated land, woods, vineyards, meadow, pastures, moors, and uncultivated land, and of roads and highways, of waterways, and, in general, of each feature of the soil and of agriculture?" *Ibid.*, xvi.

To this question the subprefect replied: Terres labourables, 80,000 hectares; cours des fermes, 38,000; bois et forêts, 6,000; prés, 20,000; pacages, 215,000; landes, bruyères et terres incultes, 16,000; routes, chemins, villes, bourgs, etc., 12,000; and rivières et ruisseaux, 5,000. *Ibid.*, 138.

These figures are obviously erroneous for the overall total area of the *arrondissement* does not exceed 90,000 hectares. The error is apparently in the ciphers, but it is not possible to accurately ascertain their exact meaning.

The animals which feed on the grasses are oxen, horses, cows, and sheep; sometimes the best grade of beef cattle are put out upon this land, a practice which improves them more and more. Cows are put in the farm lots which are planted or in inferior pastures; horses consume grasses of lesser quality; sheep subsist on all types of land; their prolonged habitation aids in the growth of the grasses the following year, but their waste value lasts only a year.

Pasturing begins about April 15 and ends with the year; it is prolonged sometimes into the winter months of the following year; but more often one is then obliged to feed hay to the animals in the pasture; they are sometimes put in stables when the ground is covered with snow.

The number of animals that regularly feed on a hectare varies according to the quality of the soil; on those of first grade the average for the entire *arrondissement* is 2 oxen per hectare; on those of second grade they are capable of sustaining 3 for 2 hectares; in the farmyards a milch cow consumes the grass of a hectare; fattened beef cattle eat about one-half less.

4. There exist some swamps in three or four communes in the canton of Mézidon; some at Biéville, Percy, Mézidon; their extent is not very considerable. They are overrun by animals; they do not appear to be susceptible of drainage because their surface level is extremely low; the addition of their produce would not compensate, by far, for the expense which their drainage would necessitate; moreover, there has been no proposal submitted to the administration, there has never been any project submitted, and neither has any work of this kind been accomplished.

3. Plantations

1. The extent of woods is approximately 6,000 hectares. The timber trees, estimated at about 300 hectares, are regularly exploited at the age of 30 or 40 years; their species are oak, beech, birch, and aspen; there are only one or two cuttings made each year in the forest; part is used for fuel; the rest, other than that which is not converted into charcoal, is used by the linen cloth bleachers and brandy distillers.

Purchasers from an auction of all types of cordwood have the oak stripped, and the bark which comes from it made into tanner's bark which is used in the preparation of leather; the base of the trunk of the willow, of the wild cherry tree, and of the birch, when they are not too stout, are used to make hoops for barrels; they make rafters and joists out of aspen and oak. No use can be made of the acorns, beechnuts, and resins, which are left to those who wish to gather them. Brushwoods are exploited every 9 to 10 years and some times 15 or even 20 years, but are usually exploited every 10 years. They are estimated at 475 hectares as the amount cut each year.

2. The fruit trees which are raised extensively are the apple, the pear, the cherry, and the heart cherry.

Apple and pear culture annually receives further extension; cider is extracted from the apples. Quite often, when there is a good market, it is, like pear, converted into brandy, which is the source of extensive industry and commerce. The trees prosper in a solid and clay soil. They cannot be planted too deep and they require a good exposure. The pear tree thrives on moisture and the apple in a virile soil. Manure or rich soil deposited at the base of young trees facilitates their growth.

There is, perhaps, no farmyard devoid of walnut trees; but one does not increase the number of them because the shade which they give is harmful to the trees which surround them and to the grass which grows under their branches.

The cherry and heart cherry are only satisfactory to a limited extent, and their fruit is a matter of speculation. These trees are not numerous like the apple and pear; they require favorable conditions, and manure and wastes are essential to them.

3. Many proprietors have developed apple and pear nurseries, either as a matter of speculation, or in order to introduce means of augmenting the planting of their land; it is believed that the number of these nurseries is considerable, because during the past two years the seedlings, which formerly were valued at from 2 francs to 2 francs 50 centimes are sold for 50, 60, and 75 centimes. For this last price one can buy a young and well developed tree of the best kind. Sometimes proprietors mix in with their apple and pear nurseries some elm and ash seedlings, and in much the same manner of propagation by cuttings as used in the white poplar; other proprietors, but a small number, plant acacia, sycamore, planetree, etc.

The considerable unforseen decline in the price of young trees is due to neglect by some nurseries; others are not able to withstand less care, because the actual value of the trees, even though quite moderate, is just sufficient to compensate the

grower for the expense of the cultivation. One would not be able to appreciate even by observation the extent of the diverse nurseries without running the risk of making too many errors in detail required in such a work.

4. *Waterways*

4. Rivers. The course of rivers causes accidents only at times when they overflow. After a heavy rain the water attains an extraordinary height and carries away material from the bleaching grounds, uprooted trees, ruins of garden beds, footbridges, etc.; but fortunately these accidents are infrequent.

Before the establishment of the highway from Lisieux to Pont-l'Évêque, the river Touque, which takes its name at Lisieux, carried the boats by which one shipped from this town oils, soap, herring, codfish, and other grocery items destined to the merchants of Rouen, Dieppe, St. Valery, and Honfleur. The towing of these boats was done by manual labor, and at that time the banks of the river were kept in good order. By this means it was found that the river could be confined to its course, but since the establishment of the highway, the transport of merchandise is by land, and it is much shorter than by water. It would be possible to make the river navigable again only by putting demands on the proprietors of the lands which border it to make extensive repairs which would require expenditures of such an extent as to be prohibitive. Such work would not result, moreover, in any great value because, as has been said, it is already more advantageous to transport by land than by water.

From Lisieux to the mouth of the Touque, fishing is leased to the profit of the government. The fish that are found in this river are salmon, which come up from the sea in abundance toward Christmas time, but which have degenerated considerably. The fishermen call them the *bécard* because, in this season, they grow a hook at the end of the lower part of the head; the trout, the *monnier*, and the eel are abundant in this river.

5. *Uncultivated Lands*

The only other uncultivated lands are some heather of very poor quality, and only a small amount of it is capable of being cleared; there is not a year that the proprietors do not clear the heaths, and in order to make it more productive, if the soil is not too bad and, in an effort to make it more productive, the proprietors plant apple and pear trees which shed on the ground and enrich it. Thus one is able to report the means by which the productivity of the land is increased based upon local knowledge and particular interest which are not negligible in such an industrious region as this one.

6. *Highways and Local Roads*[15]

The existing means of communication are certainly very adequate, but it is most essential that they be practicable at all times; the bad state of the roads have been on the increase ever since the law of October 6, 1791,[16] by which the upkeep was left in charge of the communes. That is to say, the repairs which have been made since, although very expensive, have not improved them. The evidences of these repairs have speedily disappeared, having been made at different times, they have been removed one after another. They are an expenditure which is nearly a pure loss for the communes which are supporting them. If one wishes to conserve the local roads in a good state, it is necessary to guarantee their annual maintenance as is the practice for first and second class highways; but the experience that the subprefect has acquired in this phase of administration has given him the strongest conviction that it would be extremely difficult, one might say impossible, to eliminate the numerous abuses, which are so ruinous, resulting from the commune system of repair and involving excessive and expensive delays arising from adjudications. The opinion of the subprefect, and in accordance with the principal proprietors and the council of his *arrondissement*, has always been, and is more than ever, that the repair of highways ought to be put, as formerly, in the charge of the individuals concerned. Though there would likely be some exceptions, this ought to be only of the highways extending from village to village, village to town, and town to town. If the government does not believe this proposition to be acceptable, at least it would appear indispensable to classify, in conformity with the law of

[15] Even in the regime of Louis Philippe the roads of France still consisted of the three principal classes, national highways, departmental roads, and communal roads.

[16] Duquénel, *Lois municipales, rurales, administrative et de police* . . . (ed. 2, Paris, 1835), vol. 1, code rural, ch. 1, sect. vi, p. 47–48, under the Constitution of 1791 and a part of the administrative reforms dating from the spring of 1790.

October 6, 1791, the local roads and to reduce their number in proportion to the inadequacy of the communal resources. This matter ought to be left to the local administrators; the roads that would not be thus classed, in carefully prepared tables, would be considered as rural roads where the improvement and necessary repairs would be dependent upon their particular condition. This indispensable measure, recommended a long time ago by various laws, would prevent a host of difficulties which are constantly arising in an effort to determine if such and such a road is a highway or a local road, would avoid all confusion in this regard on the part of the administration, and would reassure its policy in a satisfactory manner. The subprefect calls to this topic all the attention of the superior authorities.

7. *Rural Construction*

The information requested under this heading is recorded in the reply to the fifth question of the report hereto attached.[17] One would only be able to render a tiresome repetition.

CHAPTER II. PRODUCTS OF AGRICULTURE

1. *Cereals*

[From a table attached to the report, it appears that the quantity of wheat harvested is some 198,678 hectoliters, that the consumption is some 270,000 hectoliters, that the importation has risen to 826,000. Mixed wheat and rye: harvested, 9,600 hectoliters; consumed, 13,300 hectoliters. Barley: harvested, 9,600 hectoliters; consumed, 12,600 hectoliters; imported, 3,000 hectoliters.][18]

2. *Small Grains*

[Same source. Oats harvested, 71,750 hectoliters; consumed (including seed), 48,000 hectoliters; exported, 23,750 hectoliters (compensation made by importation). Potatoes harvested, 1,360 hectoliters; consumed (including seed), 1,360 hectoliters.]

3. *Textile Plants*

[Same source. Flax harvested, 2,000 kilograms; used, 2,000 kilograms; imported, 60,000 kilograms. Hemp harvested, 33,000 kilograms; used, 33,000 kilograms.]

When the hemp is harvested in the field, the seed is obtained by beating the hemp with the hands or with pieces of wood while on a bench or framework. Later the head of the plant, from which the seed is obtained, is cut off. The hemp is tied in small bundles about the size of an average man's thigh and then 10 or 12 of these bundles are bound together similar to bundles of straw. One fastens 10 or 12 of these large bundles together, and they are deposited in a retting pond, which is a pool of stagnant water. The hemp bundles are covered and loaded down with stones in order to make them completely submerged in the water. The bundles remain thus for 12 to 15 days. They are removed only when it is apparent that the hemp cortex is rotten and that the hemp fiber can be detached with ease. The bundles of stalks are broken up into their original position. Each separate bundle is removed by its top; one works around the fibers from the base; and then each is laid out on the ground. One selects a flat terrain exposed to the sun; the action of the air, and more especially the sun, helps to complete the retting process by detaching the fiber and cortex. One removes the strongest fibers; the inferior ones are broken up into a kind of mush. The hemp fiber, which is thus removed by particles, are kept together by the following process: a handful of fiber or cortex is held by the left hand against a plank some 3½ feet in length, the hemp descends along the side of the plank and with the right hand or with a piece of wood of average size one beats the hemp, and finally it is carded with a comb in order to clean it.[19]

4. *Other Plants Cultivated Extensively*

Green vegetables cultivated are: green peas; beans, large and small; kidney beans which are

[17] Item 5 of the Questionnaire of January 1812 reads: "Of what character are ordinary constructions and shelters of rural dwellings, and what materials are used on them?" *La Statistique agricole*, xvi.

The subprefect's reply was: "Rural dwellings are made of wood and clay, are built upon foundations of masonry consisting of lime and gravel mixed with wheat, barley, or oat husks. There exists some constructed of stones and bricks, but they are few in number. For the most part the dwellings are roofed with thatch or straw which have been picked by hand and go by the name of reed. Some others are roofed with tile." *Ibid.*, 139.

[18] This and similar paragraphs in brackets are translations of the adaptations made in 1914 of the tables attached to the report.

[19] The account given here is incomplete and not wholly accurate. See S. S. Boyce, *Hemp* (New York, 1900), 21–25, and 30–33, for an excellent summary of the early history of hemp culture in northern France.

only a sort of small bean that one eats while still green and before they reach their maturity; onions, cabbage, carrots, turnips, salsify, artichokes, lettuce, celery, chicory. As to the harvest of these vegetables, be it noted: peas and large beans in mid-June or later; kidney beans in the months of July, August, and September according to the time they had been planted; onions at the end of August; cabbage nearly any time according to the variety; carrots, turnips, and salsify in November and December and often in the first two months of the following year; artichokes in the months of June, September, and October; lettuce from April until the end of September; celery in midwinter, and chicory in the months of July, August, September, and October. Peas and beans are served on all tables without distinction; the rich, the poor, the people of all classes consume them. Fresh peas and large beans when they are yet only a third or fourth developed are sought by certain of the upper classes. All of this produce exists in abundant quantities in the *arrondissement*; the quantity imported from the outside is balanced by what is exported.

5. *Forage*

[Table attached to the report. There were 800,000 quintals of fodder of all types harvested and consumed in the *arrondissement*.]

It is a recognized fact that the grain harvest of this *arrondissement*, in an ordinary year, is sufficient to feed the people only during 4 to 5 months out of the year. If cereals are a basic subsistence for humans, so fodder is a necessary nourishment for animals, and one would think that there would be no export of this commodity. The terms of the leaseholds make it obligatory on the part of the tenants to use the hay and straw on the property, a fact which strengthens this opinion. The imports are not very considerable because the proprietors in the neighboring *arrondissements* impose the same obligations on their tenants.

6. *Wood*

Information has already been given on this subject in the reply to the first question of the report attached hereto;[20] it will, therefore, be sufficient to add here that in the average cuts of wood there is little to be found which is suitable for construction purposes, that the wood encountered is for the most part in the hedges of the farms, that the oak which grows everywhere and the elm which exists only on the farms are the best suited for the cooper trade; the trellis and lathe are durable only insofar as they are of oak. With walnut the carpenters and cabinetmakers construct very beautiful furniture such as tables, commodes, and secretaries. If all the wood is not used or consumed in the district, there is but a very small percentage exported which one may suppose equals the quantity imported.

7. *Fruit Trees*

1. If chestnut trees exist in the district their number is so insignificant that one does not feel obliged to make a statement on them.

2. Stone fruits. Their harvest has been mediocre.

3. Cider fruits. [Table attached to the report. Cider produced, 60,000 hectoliters; consumed, 40,000 hectoliters; exported, 2,000 hectoliters. Price: 12 francs per hectoliter. Pears harvested, 40,000 hectoliters; consumed, 40,000 hectoliters; price, 4 francs per hectoliter.]

CHAPTER III. ANIMALS ASSOCIATED WITH AGRICULTURE

1. Horses, donkeys, mules. The table requested shall be included at this point.

[Number of horses, 5,400; donkeys, 120; mules, 40.]

Horses are the subject of a considerable trade. Those which are attached to agriculture are employed in the transport of produce, in spreading manure and fertilizers, in the labor and work of all types in the fields. Good types are provided by breeding, and it is sufficient.

The business of horse trading has improved in the region of Auge, where it has increased more than anywhere else.

2. Horned animals. The table requested shall be included at this point.

[Number of horned animals: 33,380, of which there are 380 bulls, 10,000 beef cattle, 11,000 cows, 2,000 heifers, 10,000 calves. The number born annually: 6,500 males, 7,000 females. Annual consumption: 2,700 beef cattle of 200 kilos average weight; 3,600 cows averaging 140 kilos; 8,000 calves of 30 kilos.[21] Annual mortality: 6 bulls, 30 beeves,

[20] *La Statistique agricole*, 138. See also footnote 14 above.

[21] Although livestock were generally smaller and inferior at the time, this is apparently an error unless, perhaps, the subprefect was referring to dressed meat. There is no further evidence in the documents which clarifies this point.

30 cows, 20 heifers, 25 calves; to a total of 111. Average price: bulls, 200 francs; beeves, 250; cows, 180; heifers, 100; calves, 35. Imports: 9,000 bulls and beeves; 6,000 calves and heifers; to a total of 18,000 [*sic*]. Exports: 10,000 bulls and beeves; 9,000 cows and heifers; to a total of 19,000.]

The people of this area produce a very great amount of butter and cheese. The trade in these products is very extensive; that in cheese attains its greatest importance in the canton of Livarot and in the communes surrounding it, and it is for this reason that since the earliest time the best cheeses took the name of this place, *i.e.*, Livarot cheese. Butter is made with the cream from cows' milk. Immediately after the cows are milked, the milk is put in an earthen crock, very wide at the top and very narrow at the base, whose exterior circumference is sufficiently level only to keep it from falling over. This crock is called *poêle à lait*. The crocks thus filled are kept on a shelf in a small room called the creamery.

Usually one obtains the cream, which naturally forms on top of the milk, every other day; in hot weather, one removes it every day; in the late season one can only take the cream every 3 to 4 days. The milk skimmed once gives no more cream. The skimmed milk which remains in the crock is given to the young pigs who thrive upon it. The poor use it with soup. This curd milk mixed with cream is excellent and refreshing; it is served at the table as a dessert. A good cow during 4 to 5 months of the year gives 20 liters of milk a day. This quantity of milk furnishes about 2 liters of cream. It gets converted to butter by churning vigorously for several hours with a wooden spatula in a wooden keg having a greater circumference at the base than at the top. This results in a loss of an eighth of it. This waste is not entirely lost, as it is converted into buttermilk with which one can make a sufficiently good soup.

The price of butter is from 1 franc 20 to 1 franc 30 per kilogram; it is more expensive at the close of the year than at any other time. The reason for this is simple enough, for it is at this time that less is made because the cows give less milk at that time of year.

The cheeses are made according to the following procedure. The day's milk is skimmed in the evening of each day so that one obtains much less cream than if it was skimmed only at the end of every two days. The milk which remains in the jug is exposed to the action of a temperate fire, one makes it curdle with rennet, after which it is put in bottomless wooden molds, more or less deep according to the form one wishes to give to the cheese. One puts these forms on straw mats; in the space of two days, the cheese is hardened, whereupon it is removed from the form, and placed by hand on a row of reeds, in a cave for that purpose, where it finishes dripping. Subsequently it is placed on shelves in the cave, where it remains for 2 or 3 months. When it is for sale, it will be dyed in order to give it a color of brick which distinguishes it from other cheeses.

It would appear that there is a greater advantage in making cheese than butter.

3. Sheep. The table requested is herewith attached.

[Table attached to the report. There are 50 animals of the Léonaise breed, whose wool weighed 4 kilos 152 in grease and 1 kilo 7 after washing; 150 of mixed breed, whose wool weighed 4 kilos (in grease) and 1 kilo 7 (after washing); 20,000 whose wool weighed 2 kilos 5 and 1 kilo 2.]

[The lambs are born in February and March. The sheep are sedentary, occupying the pastures. The sheepfolds are constructed well enough and healthy enough, cleaned out four or five times a year. One raises for sheep sainfoin, trefoil [clover], a little lucerne, some peas and some winter vetch, but they have recourse to these only rarely. One gives approximately 2 kilos of dried food to an adult sheep when it is not on pasture.]

The most common diseases among sheep are the rot, the mange, and the smallpox. The entire flock is inoculated for the rot when there is only a mild outbreak in one or several animals. Otherwise, they would nearly always all die except those individuals whose force of constitution would save them from this contagious and deadly malady. Mange is obstinate when the sheepfolds are allowed to go a long time without cleaning. Mange is cured by means of a decoction of tobacco with essence of turpentine. When it is chronic, it is treated with a salve of pork grease, essence of turpentine, and liquid mercury.

[The price of wool per kilo in grease: 1806,—Léonaise, 5 francs 50; mixed, 2 francs 60; native, 2 francs 20. 1811,—Léonaise, 3 francs 50; mixed, 2 francs 80; native, 2 francs 40. 1814,—Léonaise, 5 francs; mixed, 2 francs 60; native, 2 francs 10.]

The growers are of the opinion that sheep are not susceptible to much improvement. They have not investigated the Merino breed, because they do not

prosper in this country. This is probably a mistake, but it is a well established point of view.

The sheepfolds are large and airy. Shepherds and dogs are used generally and especially in extensive culture where one pens in the sheep, for in this way the land is improved in a very practical manner. Sheep are fed in the fold only when it is rainy or there is snow. The best hay is given them to eat. Each sheep is capable of producing a profit of 3 to 6 francs, but the expense of food and wages of a shepherd consume about half of it. No other flocks are known to exist in the district as there is little land subject to rights of common. There are no common flocks.

4. Swine are numerous. Those which are not sold or consumed in the district are taken to neighboring markets. There is a considerable trade in live animals but not in the cured form. More than half of the swine raised locally are cured and consumed.

5. Beekeeping is not important; it does exist, however, on a certain number of farms. If one desires to increase their number, the number of hives in which they deposit the honey and wax is increased. When it is time for the swarm to leave the hive, either because they are too numerous or for other causes, one calls them by beating very hard on a saucepan with a piece of iron.

The quantities of wax and honey that they furnish in a year is capable of being evaluated thusly; that for honey at 4,000 kilograms and that of wax at 1,500.

The price of honey is 2 francs per kilogram and wax is 2 francs 50.

6. One cannot say that there is a prevalence of disease among livestock. However, it does occur too frequently. Sometimes beef cattle, sometimes cows have fallen dead in the pastures or farmyards. These accidents are attributed to what is called in this region *la pisserie de sang*. It is presumed that there are some soils which transmit this disease to horned animals. However, it is more reasonable to think that the real reason is that the farmers put the weak animals out at the time when grasses are most nourishing, and because of the abundance of nourishment and the superior quality of grasses, the animals become overheated and their loss results.[22]

[22] From the foregoing discussion the subprefect was apparently referring to what is commonly called bloat in cattle.

An estimate of the resulting loss is 10 to 20,000 francs.

CHAPTER IV. GENERAL OBSERVATIONS

1. The state of the atmosphere during the year. There has been a little frost in the first two months of the year; the months of March and April have been sufficiently pleasant.

The apple and pear trees were very full of blossoms; they promised a very abundant harvest, but the unexpected heavy rains in the month of May and the sun which appeared immediately afterward burned the blossoms as far as the calyx, and that which results, instead of fruit, is in this country called a clove and the hopes of the farmers have been destroyed. The temperature has had only a detrimental influence on the sowing of oats, which is done in March. The harvests have not suffered any further; they have been good and abundant because the remainder of the year has been generally a dry period which is desirable for the growth of cereal plants. Wheat is manured in October; barley, oats, and lesser grains in March, and it is for this season that one says, in speaking of this sort of sowing, that one does the *march*. It has not been the custom to make meteorological observations in the district. However, it is known that the average annual rainfall is about 12 to 13 inches. Last year was not considered a wet year, and one may thus conclude that, for the year, the extent of rainfall was about one-half the normal amount.

2. One does not know of any circumstances which have hindered the work of agriculture; there have been no plagues to the crops since they have been abundant.

3. Rural economy has not made progress; it is always the same mode of culture. The principal objective of the farmers is to make their labor and the spread of manure in season as agreeable as possible; there is no other source of inspiration.

4. Sometimes roadways are planted. It indicates a means of expanding the estate by authorizing the proprietors to plant for themselves and allows them title to the trees thus planted.

It seems that they are obliged to plant only along first class roads because, for the others the shade of the trees tends to hold the moisture which results in making the road more susceptible to erosion.

5. The number of veterinaries is five, and they enjoy a merited confidence. They are all busy, more or less; those who are the most distinguished are Dutrosne, resident of Lisieux, and Lasalle, of

Saint-Julien-le-Faucon, who also enjoy the best reputation.

6. Cost of the necessities of life and of the work day. The price of white bread has been 20 centimes per kilogram; that of meat 75 centimes per kilogram. There is a difference between these prices and those of 1789 to the extent of an increase of 10 centimes for bread and a decrease by 10 centimes for meat.

The rate of wages for the work day is one franc.

7. For the past two years, the number of proprietors who farm by themselves has been considerably increased because many laborers are found to be unable to take charge of the estates, and because others are demanding too much of a reduction in the terms of the leases. Moreover, a certain number of them have been unable to pay their rent, even in part. There are no known examples of leaseholds based on sharing of produce or by lease of cattle.

8. Rural police. The number of constables (gamekeepers) has been 67. Their salary is 120 to 180 francs; they have no influence; their conduct is not regular; the less culpable are those who do nothing. Most are privileged poachers who devote themselves with impunity to the chase. Their number is becoming much diminished now that the municipal councils are authorized to vote their suppression. One is able to state that none has attained the purpose of their establishment. In this district, the small proprietors maintain guard of their property; the others are able to have special guards.

For a long time, a general complaint has been raised against these agents and to bring about their complete suppression.

The most frequent offenses are the misdemeanors of the foresters, petty larcenies; they have not become more common than in former years; the agents of the administration on the one hand and the magistrates on the other instigate and assure the repression of these crimes.

In regard to gleaning, the gleaners are only able to enter into a field at the time the bundles are collected and that the sheaves are completely removed from the fields. Many of the tenants are accustomed to removing the stubble to use as straw for animals and convert it to manure. This practice is not generally adopted; the cultivators, who at the time of tillage plow under this stubble in the ground, have a better harvest than those who have removed the stubble if, moreover, they spread an equal amount of manure over the ground.

In this district there exists neither the right to gather fuel in the forests or gleanage in the vineyards.

Beggars and tramps are not numberous in the country. A workhouse established at Caen, which is sufficient to hold all of them, has considerably decreased their number.

ADDITIONAL CHAPTER. MANUFACTURES

There exists in this district a manufacture of cloth and frocks. This manufacture is of considerable extent; the wool of the country is used in making frocks, and flax is used for cloth. These two principal phases of industry employ approximately one-tenth of the population.

There exists a manufacture of ox-hair blankets which offers another branch of industrial production of some value.

A fourth branch of industry that is rather considerable is the manufacture of leather. Ox hides and those of cattle and sheep are utilized in this production.

NEWS NOTES AND COMMENTS

SEPTEMBER 1947 MEETING

Members of the Agricultural History Society met with the American Farm Economic Association at Green Lake, Wis., on Sept. 8–11, 1947. At the session devoted to Agricultural Economics and History, held on Sept. 10, Rodney C. Loehr of the University of Minnesota presented a paper on "Agriculture and History" and Bushrod W. Allin of the U. S. Bureau of Agricultural Economics, a paper on "The Objectives and Methods of Agricultural Economics." Earle D. Ross, president of the A. H. S., presided. The papers were discussed formally by Wilbur H. Glover of the State Historical Society of Wisconsin and Theodore Saloutos of the University of California, Los Angeles, and additional observations were made from the floor. The two papers and the remarks of the two discussants are printed in the *Journal of Farm Economics*, 30:537–557 (August 1948).

At the business meeting of of the A. F. E. A. on Sept. 11, its Committee on Library and Library-Custodian, consisting of Wilbur H. Glover, Mary G. Lacy, and Anne Dewees Taylor, made a report. The objectives were stated thus: "To preserve the writings of the members of the American Farm Economic Association

in a way to honor the contributors and encourage all members to record their creative thinking in permanent form. To assemble a compact and readily available reference library that portrays the growth of the thought of the members of the Association in the field of agricultural economics." For the entire report, see the *Journal of Farm Economics*, 29:1014–1015 (November 1947).

APRIL 1948 MEETING

The Agricultural History Society met with the Economic History Association and the Mississippi Valley Historical Association at Rock Island, Ill., on Apr. 22–24, 1948. For this occasion, Everett E. Edwards arranged two sessions.

On the morning of Apr. 23, the A. H. S. joined with the E. H. A. and the M. V. H. A. at a session devoted to Significant Aspects of Forest Products History, and the following papers were read: "The Timber Lands of the Timber Barons," by Lucile Kane, Minnesota Historical Society; "Rafting Down the Chippewa; The Daniel Shaw Lumber Company as a Type Study," by Arthur R. Reynolds, University of Minnesota; "Who Were the Lumberjacks? The Labor Supply in the Lake States Region," by George B. Engberg, University of Cincinnati; and "The Tree Farm Movement: Its Origin and Development," by Paul F. Sharp, Iowa State College. Rodney C. Loehr, director of the Forest Products History Foundation at the Minnesota Historical Society and vice president of the A. H. S. presided.

On the morning of Apr. 24, the A. H. S. held a joint session with the M. V. H. A. on Significant Aspects of Middle Western Agriculture, and the following papers were read: "Subsistence to Commercial Corn-Belt Farming; Southern Iowa Agriculture, 1833–1890," by Mildred Throne, Washburn Municipal University; "The Agricultural Program of a Leading Farm Periodical, Colman's Rural World," by George F. Lemmer, University of North Dakota; and "The Rural Community in an Urban Age; The Changes in Michigan since 1900," by Sidney Glazer, Wayne University. Everett E. Edwards presided.

THE 1948 ANNUAL MEETING

The Agricultural History Society held its 1948 annual meeting in the Conference Room of the National Archives in Washington, D. C., on Sept. 16 at 8:00 p.m. Frederick Merk, the president, presided.

At the business session, Charles A. Burmeister, the secretary-treasurer, read the minutes of the previous annual meeting and presented the financial statement. The auditing report of Robert E. Post and Weymouth T. Jordan was then read and accepted. Everett E. Edwards, the editor, reported on the joint meetings with other organizations, the journal, and membership trends. The standing and special committees made no reports, and no new business was brought up. Wayne D. Rasmussen, representing the nominating committee, reported that 89 ballots had been returned and that the following were elected for the year, 1948–49: president, John D. Hicks; vice president, Paul W. Gates; secretary-treasurer, Charles A. Burmeister; executive committee, Robert G. Dunbar and Weymouth T. Jordan.

Following the business session, Frederick Merk presented his presidential address entitled "Eastern Antecedents of the Grangers."

DECEMBER 1948 MEETING

The Agricultural History Society met with the American Historical Association and other historical organizations at the Mayflower Hotel in Washington, D. C., on Dec. 28–30, 1948.

The overall theme for the joint session of the A. H. S., held on the morning of Dec. 30, was Agriculture's International Relationships. At this session the following papers were read and discussed: "The Early Impact of Japan upon American Agriculture," by Henry F. Graff, Columbia University; "American Interest in World Agriculture, 1861–1865," by Richard O. Cummings, University of California, Los Angeles; "American Diplomacy and the Repeal of the French Pork Prohibition, 1889–1892," by Richard M. Packard, Lasell Junior College; and "The Marketing of Colombian Coffee," by Robert Carlyle Beyer, Miami University. Weymouth T. Jordan of Alabama Polytechnic Institute, a member of the society's executive committee, presided.

At the luncheon of the A. H. S. on the same day, Norris E. Dodd, Director-General of the Food and Agriculture Organization of the United Nations, presented an address entitled "The Food and Agriculture Organization: Its History, Organization, and Objectives." The society's president, John D. Hicks of the University of California, Berkeley, presided, and Charles A. Burmeister, the society's secretary treasurer, introduced the speaker.

ACTIVITIES OF MEMBERS

Jack Abramowitz, a student member of the A. H. S. at Columbia University, has been doing research on the role of the Negro in the agrarian revolt of the 1880s and 1890s.

William D. Barns of West Virginia University has published an article on "The Influence of the West Virginia Grange upon Public Agricultural Education of Less than College Grade, 1873–1914" in *West Virginia History*, 10:5–24 (October 1948).

Margaret R. Beattie, a student member of the A. H. S. at Cornell University, has received a Social Science Research Council research training fellowship. Her field is the history of land use and ownership in the Corn Belt.

E. W. Bowers of Clarksville, Texas, has been collecting data for an agricultural and financial history of Red

River County, one of the earliest settled communities of Texas.

Charles J. Brand's history of the National Fertilizer Association, which appeared in the *Scientific Monthly*, 66:33–46 (January 1948), has been reprinted as a 20-page pamphlet.

Donald D. Brand has moved to the University of Texas where he is organizing a department of geography. He is continuing his research on the history of cultivated plants and agricultural techniques in Latin America.

David J. Brandenburg of the history faculty at American University is engaged in a study of eighteenth-century French agriculture.

Herbert O. Brayer went to Paris in July 1948 to complete the organization incident to the creation of an International Council of Archivists sponsored by UNESCO.

Solon J. Buck, ex-president and life member of the A. H. S., resigned as Archivist of the United States in June 1948 to accept the position of chief of the division of manuscripts and the chair of American history at the Library of Congress.

Andrew A. Clark of the department of geography, Rutgers University, is currently engaged in field and archival research on the history of land use in Maritime Canada.

E. Merton Coulter of the University of Georgia, ex-president and life member of the A. H. S., received a Litt.D. degree at Marietta College in June 1948.

Richard O. Cummings of the University of California, Los Angeles, taught at Western Reserve University during the summer of 1948. He presented a paper on "Historical Influences and Technical Collaboration in Agriculture" at the Inter-American Conference on Conservation of Renewable Natural Resources at Denver, Colorado, in September 1948.

Robert G. Dunbar of Montana State College has a chapter on the "History of Agriculture [in Colorado]," in LeRoy F. Hafen, ed., *Colorado and Its People* (Chicago, Lewis Historical Publishing Co., 1948), 2:121–157.

Walter H. Ebling, agricultural statistician, Madison, Wisconsin, has reported that his office is publishing a State bulletin with the title, *A Century of Wisconsin Agriculture*, as a contribution to the Wisconsin centennial program.

Everett E. Edwards has a historical article on "The Settlement of Grasslands" in *Grass*, the 1948 Yearbook of the U. S. Department of Agriculture.

David M. Ellis of Hamilton College has an article on "The Oregon and California Railroad Land Grant, 1866–1945," in the *Pacific Northwest Quarterly*, 39: 253–283 (October 1948).

Rudolf E. Freund of North Carolina State College, Raleigh, has a study of "John Adams and Thomas Jefferson on the Nature of Landholding in America" in *Land Economics*, 24:107–119 (May 1948).

Charles E. Gage, tobacco specialist, retired from the U. S. Department of Agriculture in May 1948 after 42 years of service. He is now a consultant of the American Tobacco Company.

Paul W. Gates of Cornell University has an article on "Hoosier Cattle Kings" in the *Indiana Magazine of History*, March 1948, and an article on "Cattle Kings in the Prairies" in the *Mississippi Valley Historical Review*, December 1948.

Wilbur H. Glover of the State Historical Society of Wisconsin has completed his history of the Wisconsin College of Agriculture.

A. Whitney Griswold of Yale University has recently published *Farming and Democracy* (New York, Harcourt, Brace & Co., 1948). It is a historical study of the idea that farming as a family enterprise is the "backbone of democracy."

Marshall D. Harris is co-editor with Joseph Ackerman of *Family Farm Policy* (University of Chicago Press, 1947). It constitutes the proceedings of a conference on Family Farm Policy, attended by participants from the British Commonwealth, Northern and Central Europe, Latin America, and the United States, at the University of Chicago, Feb. 15–20, 1946.

Albert V. House, Jr., assumed the chairmanship of the department of history and political science of Triple Cities College of Syracuse University at Endicott, New York, in September 1948.

The volume by Robert L. Jones of Marietta College on the *History of Agriculture in Ontario, 1613–1880*, was published by University of Toronto Press in 1946.

The study by Weymouth T. Jordan of Alabama Polytechnic Institute on *Hugh Davis and His Alabama Plantation* has been published by the University of Alabama Press. He has an article on "Alabama as a Field of Historical Research" in the *Alabama Review*, January 1948, and an article on "Ante-Bellum Mobile: Alabama's Agricultural Emporium" in *ibid.*, July 1948.

Nelson Klose, formerly of the University of Maryland, has moved to Central State College, Edmond, Oklahoma. During the summer of 1948 he worked on the revision of his study of the history of plant introduction by the U. S. Department of Agriculture.

George F. Lemmer of the University of North Dakota spent the summer of 1948 in Chicago where he studied the educational influences of the early farm periodicals.

J. Clyde Marquis of Orange, Virginia, is planning to write his observations of the attempts to approach agricultural problems internationally since 1900.

Thomas P. Martin, formerly assistant chief of the division of manuscripts in the Library of Congress, was visiting professor of history at Ohio University during the first semester of 1948–49. He is teaching at West Virginia University the second semester.

H. C. Mason of Brampton, Ontario, recently completed a series of 135 popular articles on phases of agricultural history which have appeared in the *Farmer's Magazine* (Toronto) during the past 12 years.

Albert L. Olson has completed a study of the agrarian

background of the late colonial and early federal period of United States history. The emphasis is on political, institutional, and economic factors as causes of migration. In September 1948 he left Marshall College, Huntington, West Virginia, to assume a professorship of history at Augustana College, Rock Island, Illinois.

James W. Patton, formerly head of the department of history and political science at North Carolina State College, became assistant director of the Southern Historical Collection at the University of North Carolina on July 1, 1948.

Arthur G. Peterson has returned from Korea where he served as chief of the statistics division of the National Economic Board.

Horace G. Porter, formerly with the Federal Reserve Bank of Richmond, is with the Economic Cooperation Administration in Paris.

Ben F. Rogers of the University of Minnesota is investigating the early history of the U. S. Department of Agriculture.

Hubert G. Schmidt of Rutgers University, Newark, prepared the modern edition of Andrew D. Mellick's *The Story of an Old Farm* (1889) which has been published with the title, *Lesser Crossroads*, by the Rutgers University Press. The central theme of Mellick's narrative is the migration to America of a German middle-class family and its adjustments to a new land. Schmidt's 8-page preface provides biographical data on Mellick and evaluation of his work.

A third edition of Louis Bernard Schmidt's *Topical Studies and References on the Farmers' Movements in the United States, 1650–1948* was issued by the department of history and government, Iowa State College, Ames, in 1948.

St. George L. Sioussat, for ten years chief of the division of manuscripts and incumbent of the chair of American history at the Library of Congress, retired in March 1948.

The study by Carl C. Taylor of the U. S. Bureau of Agricultural Economics on *Rural Life in Argentina* has been published by the Louisiana State University Press.

Mildred Throne, formerly of Washburn Municipal University, Topeka, Kansas, joined the editorial staff of the State Historical Society of Iowa, Iowa City, in August 1948. She presented a discussion of "Suggested Research on Railroad Aid to the Farmer with Particular Reference to Iowa and Kansas" at the Lexington Group session of the Mississippi Valley Historical Association at Rock Island in April 1948.

Nannie M. Tilley's book entitled *The Bright-Tobacco Industry, 1860–1929*, has been issued by the University of North Carolina Press. Miss Tilley now teaches at East Texas State Teachers College, Commerce.

Frans Verdoorn, managing editor of *Chronica Botanica*, has assumed the directorship of the Los Angeles State and County Arboretum, established in 1948 at the former Rancho Santa Anita at Arcadia, near Pasadena, California, to promote the enjoyment, study, and utilization of the plants of Southern California and the World. It is planned to develop a modern arboretum and botanical garden with various educational and research departments. He will continue to edit *Chronica Botanica* and related series.

The volume by Edward Norris Wentworth on *America's Sheep Trails* has been published by the Iowa State College Press. He is now working on a historical study of swine.

THE FOREST PRODUCTS HISTORY FOUNDATION

The Forest Products History Foundation was established at the Minnesota Historical Society in 1946. The foundation is sponsored by interested men in the industry and by the University of Minnesota. The objective is a national center for the study of the development of all aspects of lumbering and forest-products manufacture. Rodney C. Loehr of the University of Minnesota is the director.

A comprehensive bibliography of source materials has been compiled, and extensive field work has been carried on to locate pertinent manuscripts and important collections of business records. The foundation is cooperating with local and regional agencies in collecting and preserving the records of the industry. It has secured a rich store of personal information by interviews with loggers and lumbermen and a collection of pictures and also tools and implements. Research for a number of monographic studies is in progress.

The Forest Products History Foundation has issued three printed publications. No. 1 of its series is a 16-page illustrated booklet on the origin, organization, and objectives of the foundation. Publication No. 2, a 56-page booklet by C. M. Oehler entitled *Time in the Timber*, is the author's recollections and observations as a camp clerk and timekeeper for the Virginia and Rainy Lake Lumber Company during the summer of 1928. It provides a vivid and informative account of lake-railroad logging in northern Minnesota. No. 3 is a 32-page monograph by Lillian M. Willson on *Forest Conservation in Colonial Times*. Special attention is given to the origins of current practices.

THE ROYAL BOTANICAL EXPEDITION TO NEW SPAIN

The volume by Harold William Rickett on *The Royal Botanical Expedition to New Spain, 1788–1820* (issued by the Chronica Botanica Co., Waltham 54, Mass., as *Chronica Botanica*, 11(1):1–86, Summer 1947, $2.50), is scientific history at its best. Dr. Rickett, now bibliographer of the New York Botanical Garden, was formerly professor of botany at the University of Missouri. That he is also a capable historian and a charming writer is presently demonstrated.

The history of the Royal Botanical Expedition to New Spain is a history of botany in Mexico, Guatemala, Cuba, Santo Domingo, and Puerto Rico from 1788 to

1820, for members of the expedition did most of the botanical exploration in these areas during this period, established a botanical garden at Mexico City, and offered the first formal instruction in botany in New Spain. The expedition was organized with five scientific staff members: Martin de Sessé y Lacasta, Jayme Senseve, Juan de Castillo, Josef Longinos Martínez, and Vicente Cervantes. Later the expedition was joined by José Mariano Mociño Suares Losada, who was trained by Cervantes in the institution established by the expedition.

Dr. Rickett portrays the many difficulties faced by these scientists in a very human way. For instance, he says, speaking of Mociño, that "Two years later we find him studying botany in the Royal Botanical Garden of Mexico; and the next year his wife sued for divorce." Both of these circumstances, as the author demonstrates, influenced Mociño's career and, in fact, the work of the entire expedition. The difficulties faced by the members of the expedition serve also to indicate the cumbersome state of the colonial government and the vacillating policies and submergence in routine of the Spanish Government.

The author has relied upon the national archives of Mexico, *Archivo General de la Nación*, for his basic source material and has carefully documented his volume. He lists the published sources and the more important secondary works relating to the expedition and has done considerable work in attempting to reconcile conflicting accounts.—*Wayne D. Rasmussen.*

COUNTRYMAN'S COMPANION

In *Countryman's Companion* (New York, Harper & Bros., 1947, 412 p., $3.00), David B. Greenberg presents an anthology of selections which relate to "the actual business of wresting a living from the land. Man's collaboration with and dependence upon Nature is the ever-present theme, whether stated or implied." In the collecting emphasis was given to the out-of-the-way rather than the familiar.

The selections—thirty-nine in number—are arranged under four headings: The Husbandman; The Drama of Nature; Country Living as an Art, a Philosophy; and Farming as a Practical Way of Life. The time range extends from Hesiod to contemporaneous farming, but surprising as it may seem most of the authors represented are modern. Even Hesiod is represented through the medium of an essay copyrighted in 1946.

The annotations are scanty, and the book would be more useful if the editor had provided brief but adequate backgrounds for all the selections. As many of them are modern, the copyright notations supply dates, but except for this necessity the reader is largely left to orient himself. In the prefatory acknowledgments two officials of the U. S. Department of Agriculture are listed for an item that does not appear in the volume. Yet neither this list nor the pages of the section on Jefferson and Agriculture indicate that the selections on this subject were derived from a Department of Agriculture publication.

Although few, if any, anthologies satisfy all critics, it should be emphasized that this volume in spite of its inadequate annotations, provides a treasure chest of readings on a subject of perennial interest to many Americans.

THE PRESIDENTS AND RURAL LIFE

Edwin Townsend Booth's *Country Life in America as Lived by Ten Presidents of the United States* (New York, Alfred A. Knopf, 1947, xviii, 264, xii p., $3.75), presents interpretative essays entitled "John Adams: New England Freehold," "George Washington: Tidewater Plantation," "Thomas Jefferson: Piedmont Villa," "Andrew Jackson: The Cotton and the Corn," "Martin Van Buren at Lindenwald," "William Henry Harrison: Ohio Alluvial," "James Buchanan: Wheatland," "Abraham Lincoln: Backwoods Farm Boy," "Theodore Roosevelt: Rancher and Country Gentleman," and "Calvin Coolidge: Vermont Rock-Maple." The titles of the essays express succinctly and cogently the dominating interpretations of the ten men whom the author chose to consider in this volume. There is also an introduction, an "Epilogue: Ne Virtutes Sileantur," a bibliography, and an index.

The author's main objective is the delineation of the lasting values exemplified in the lives of these Presidents who (except possibly Roosevelt) grew to manhood on a farm or gave many years to agricultural pursuits or country life and who gained spiritual strength and revival by contact with the soil and rural way of life. The author also seeks to show that the combination of agrarian ideals and classical education produced unusual qualities of leadership in these men who served the Nation.

These essays are interpretative. They do not present inclusive factual accounts of the agricultural activities of the subjects. Although hardly agricultural history in the strict sense, they are interesting reading.

THE GRASSLAND OF NORTH AMERICA

James C. Malin's *The Grassland of North America: Prolegomena to Its History* (Lawrence, Kansas, The Author, 1947, 398 p., $3.00) is a series of essays on sources and research methods, together with sample case studies, relating to the Trans-Mississippi West. The pertinent writings of the scientific fields (ecology, climatology, geology and geography, pedology, etc.) that have significance for history are synthesized, and the findings are applied to the comprehension of the grassland region. Throughout the book, the emphasis is on new methodologies and viewpoints and the importance of the sciences to the work of historians. The close nexus of this volume and the same author's *Essays on Historiography* (1946) where other aspects of his-

toriography and methodology are discussed should also be noted.

The chapters of the volume here reviewed are grouped into two divisions: The Sciences and Regionalism; and Historiography. The first begins with a chapter on the grass problem. The next six chapters summarize the testimony of the sciences on the problem. There are two chapters on the early explorations of the grassland, and a tenth on the factors in grassland equilibrium. The second part considers the relations of the sciences to social theory, the communications revolution, the work of fourteen men who pioneered toward grassland equilibrium, the nexus of soil physics to tillage, the regionalism problem involved in Walter P. Webb's *The Great Plains*, and delineations of a wide range of examples of methodology for the study of the history of social change. There is a comprehensive bibliography of the scientific literature pertinent to the author's objectives and a bibliography of maps.

AGRICULTURAL LITERATUTE

The subject of Richard Bardolph's *Agricultural Literature and the Early Illinois Farmer* (Urbana, University of Illinois Press, 1948, 200 p.; paperbound, $2.00; clothbound, $3.00) is the nature and influence of the printed page as a medium of agricultural instruction in Illinois to 1870. It is presented in the form of carefully executed historical analyses of the agricultural education provided by the pertinent newspapers, advertising circulars, published proceedings and transactions of agricultural societies, and farm periodicals. The national context is adequately presented, and there is an introductory chapter summarizing the rise of agricultural books in the United States, England, and Europe.

The consideration of the mediums of agricultural instruction that were printed for consumption in Illinois is outstanding. An especially noteworthy contribution are the historical evaluations of the agricultural content of newspapers, advertising matter, and publications of agricultural societies. The author's conclusions are mainly in terms of the precise influences of these types of agricultural literature on specific ideas and practices, but the nature of the extant evidence may well preclude generalizations. Another valuable service is the ascertainment of the farm periodicals actually published in Illinois and the summarization of their histories, objectives, and influences. The Stuntz list names forty, but Bardolph has demonstrated that less than half of this number were actual Illinois farm periodicals.

This study also illustrates anew that authors ca make significant contributions to a broad segment o agricultural history if they limit their studies suf ciently in terms of geography and time so that they ca really track down and master the pertinent sources and thus insure the accuracy of their conclusions.

AGRARIAN REVOLT IN WESTERN CANADA

Paul F. Sharp's *The Agrarian Revolt in Weste Canada: A Survey Showing American Parallels* (Minne apolis, University of Minnesota Press, 1948, 204 p. $3.00) delineates the farmers' political movements in the Canadian West from the first decade of the twen tieth century to the rise of the Cooperative Commonwealth Federation and Social Credit parties of today The rapid settlement of the Prairie Provinces durin 1900–1920 is summarized in the initial chapter. Her in the "last best West" the pioneers turned primarily to wheat as a main crop and in consequence encountered the same marketing problems incident to that crop a their neighbors south of the international boundary This situation is summarized in chapter 2. Economi grievances stir urges to organize, and the initial effort in this direction are the subject of chapter 3. Closely related is the fourth chapter on the general democrati ferment on the Canadian prairies in the decade preceding World War I. Next are three chapters on th spread of the Nonpartisan League to Canada, its politi cal role there, and the general political situation in th Canadian West during the war years. Two chapter on the political movements of the twenties and a chapter evaluating the Progressive heritage complete the study.

This relatively small book makes two notable major contributions. One is the clear delineation of agrarian politics in the Canadian West during the period covered. The other is the analyses of the relationships of the farmers' movements on the Canadian prairies with those in the American Middle West. A few historians have visualized the frontier process of the United States as continuing into the Canadian West, and this viewpoint is amply substantiated by Sharp's study. Some Canadians may prefer emphasis on the differences between their agrarian movements and those of the United States, but attention to the "oneness" of North American development is a broadening experience. The common man and his ideas have found the 49th parallel a far less formidable barrier than have historians.